City of Eugene Land Use Code Audit

To: City of Eugene Project Management Team

From: Cathy Corliss and Jamin Kimmell, APG

Date June 12, 2019

Re: Final Land Use Code Audit (Task 3)

INTRODUCTION

Project Background

In May 2018, Eugene City Council passed a motion to have staff implement a process to identify barriers to housing affordability, availability, and diversity, and to suggest, evaluate, and recommend possible strategies and tools to address the barriers. This led to development of the City's Housing Tools and Strategies, the recommendations of which were presented to Council on December 10, 2018.

This land use code audit builds on the recommendations of the Housing Tools and Strategies. It focuses on assessing the regulatory land use barriers to development of the some of the housing types which were identified in the City's Missing Middle Housing Types Handbook and discussed by the Planning Commission at its March 18, 2019 work session. These housing types include:

- Accessory Dwelling Units (ADUs)
- Small Lot Detached Houses
- Row Houses (attached single-family)
- Duplexes
- Triplexes and Fourplexes
- Courtyard Apartments (and other small-scale multi-family)
- Cottage Cluster Housing

This project is funded by Oregon general fund dollars through the Department of Land Conservation and Development. The contents of this document do not necessarily reflect the views or policies of the State of Oregon. The recommendations have not been adopted by and are not a final decision of the City of Eugene.

Project Funding

This project is funded by a grant from the Oregon Department of Land Conservation and Development (DLCD). In 2018, the Oregon Legislature allocated funds to DLCD for housing planning technical assistance in House Bill 4006. The bill allocated funding "for the purpose of providing technical assistance to local governments in increasing the affordability of housing." Technical assistance includes an analysis of housing needs, audits of land use codes (to identify barriers to housing development), revisions to land use codes (to remove barriers), and implementation plans for increasing housing supply. The specific focus of this project is to audit the land use code to identify barriers to housing development. Potential solutions and code updates are not proposed as part of this project but may be implemented in the future.

Methodology

APG reviewed the City's Comprehensive Plan, land use code, and other land development documents and regulations to identify standards, criteria, conditions, or procedures that have the effect, either in themselves or cumulatively, of discouraging these housing types through unreasonable cost or delay. The focus of this audit is the City's residential zones:

- R-1 Low Density Residential Zone
- R-1.5 Rowhouse Zone
- R-2 Medium Density Residential Zone
- R-3 Limited High Density Residential Zone
- R-4 High Density Residential Zone

Where standards are noted as applicable to the "University Area" this includes the boundaries of the Amazon, Fairmount and South University Neighborhoods. In the sections that follow, for each of the listed housing types, the audit provides the following:

Definition/Description. A description of the housing type, including how it is defined in the Code and any limitations associated with that definition.

Housing Prototypes. In order to better understand how Missing Middle housing types are regulated within and across each of the residential zones, a set of prototypical developments was defined and tested against the use regulations and development standards of the Eugene Code. For more information on the prototypes, see the "Housing Prototypes Overview" section of the audit.

Assessment of Potential Barriers. This section presents an assessment of the standards in the Code that could be barriers to developing the building prototypes. The assessment is formatted into tables for each housing type. The section of the table reflects the organization of the Eugene Code (EC). The sections of the assessment are as follows:

- Uses and Permit Requirements
- Zone Development Standards
- Lot Standards
- Special Use Standards (if applicable)
- General Development Standards

Each standard is marked with an icon to indicate the extent to which it may present a barrier to the subject housing prototype, as follows:

✔	Not a potential barrier to the prototype
⛔	• Potential moderate barrier to the prototype OR • Not a barrier to the prototype, but potential barrier to other versions of the same housing type
⚠	Significant barrier to the prototype
⊘	The standard explicitly or effectively prohibits the prototype.

The identification of a barrier is not intended to imply that the regulation must be eliminated or that it does not serve an important public purpose. Many standards identified as barriers may be necessary and important regulations. The goal of identifying barriers is to compile an inventory of regulations that may need to be removed, modified, or replaced if the City desires to allow and encourage a certain housing type in that zone.

Special Applications. The audit also includes a review of two special applications—a Cluster Subdivision and Planned Unit Development (PUD)—which offer an alternative path for approval for projects or are required for certain uses in some zones.

Special Area Zones. The audit includes a review of the City's 12 Special Area Zones. The assessment of barriers to the middle housing prototypes in these zones is less specific than the evaluation of the base zones, but it does indicate the most important standards that represent barriers or may be supportive of middle housing development

Next Steps

The next step in the process is for the City to engage the community in determining which housing types may be desired in which locations. If there are potential barriers to a housing type in a location where City policy is to allow and encourage that housing type, then code amendments should be considered to remove or lessen barriers. At the same time, new regulations or standards may be considered to address concerns about the impacts of development of these housing types.

EXECUTIVE SUMMARY

The table below provides a graphical summary of the assessment of barriers to each housing type in each of the City's residential zones. The icons represent a rating of the cumulative impact of the barriers to development of the housing type in that zone. The table also identifies a few of the key barriers for each housing type.

As illustrated by the table, the R-2 zone presents the fewest barriers to development of these housing types, while the R-1 zone presents significant barriers to almost all of these housing types. The R-3 and R-4 zone present some barriers, primarily the minimum density requirements of the zone, so some higher-density formats of these housing types are more likely to be built in these zones.

Addtionally, this audit has highlighted the following six key findings on barriers to the identified housing types:

1. **There are multiple, significant barriers to development of ADUs, including the owner occupancy requirement, off-street parking requirement, and minimum lot area standard.**

The significant barriers to ADUs are highlighted as a key finding for two reasons. First, relative to infill development on a vacant lot, development of an ADU on a lot with an existing house can be complex.

Barriers Assessment – Summary by Zone

Prototype	R-1	R-1.5	R-2	R-3	R-4	Key Barriers
ADU	⚠	⊘	—	—	—	Max density, min lot area, parking, owner occupancy
Small Lot Detached	—	⊘	✓	—	—	Max density/min lot area in R-1, min density in R-3 & R-4
Cottage Cluster	—	⊘	—	⚠	⚠	• Max density/min lot area in R-1, min density in R-3 & R-4 • Cluster subdivision and PUD requirements • Multiple-family standards
Rowhouses	⚠	✓	✓	—	—	Max density/min lot area in R-1, min density in R-3 & R-4
Duplex	⚠	⊘	✓	—	—	Max density/min lot area in R-1, min density in R-3 & R-4
Triplex/Fourplex	⚠	⊘	—	—	—	• Max density/min lot area in R-1, min density in R-3 & R-4 • Multiple-family standards
Courtyard Apartments	⚠	⊘	✓	—	—	• Max density/min lot area in R-1, min density in R-3 & R-4 • Multiple-family standards

There are both physical challenges associated with accommodating the ADU and financial hurdles as most ADUs are funded by homeowners. Thus, if it is the City's policy to encourage ADU development, it may be more important to lessen regulatory barriers to ADUs given that there are many other non-regulatory barriers that constrain ADU development. Second, there are multiple, significant code barriers to ADUs, so the cumulative effect may be greater than other housing types. The three standards identified above—owner occupancy, off-street parking, and minimum lot area—each significantly restrict the number of properties where an ADU is feasible to develop.

2. R-1 zone standards present significant barriers for all missing middle housing types.

Relative to the City's other residential zones, the R-1 zone presents the most significant barriers to development of the missing middle housing types considered in this audit. These barriers include the maximum density standard, minimum lot area and certain special lot requirements, and minimum lot width. Many of the prototype developments exceed the maximum density of 14 units per acre.

The lot size standards of the zone require relatively large lots for a duplex, triplex, and fourplex. The minimum lot area is larger than necessary to meet the maximum density standard of the zone. For example, a duplex on a 6,100 square foot lot would equate to a density of 14 units per acre, but the R-1 zone standards require duplexes have a minimum lot size of 8,000 square feet. In addition to the minimum lot area, most missing middle housing types are subject to other special lot requirements which limit the number of eligible lots where they can be developed. For example, a triplex or fourplex must be on a lot that was designated for a triplex or fourplex in a subdivision plat, or must be approved through a planned unit development. Because the planned unit development process is cost prohibitive for smaller multi-family projects, this effectively prohibits development of a single triplex or fourplex on a vacant infill lot, unless that lot was designated for this housing type in the subdivision.

Removing barriers to development of middle housing types in the R-1 zone would represent a significant change from existing regulations and is likely to be controversial in nature. Yet, the R-1 zone covers a majority of the residentially zoned land in the City of Eugene and presents an opportunity to add more housing and increase housing options in multiple locations throughout the City.

If future planning projects find that there is significant variation in where additional housing types are supported within the R-1 zone, then one approach might be the development and implementation of a new residential base zone. The new zone would allow for a wide variety of middle housing types and would be applied to locations within the R-1 zone where this is supported. This would not preclude changes to the R-1 zone more broadly but would allow the City to differentiate areas with more and less change.

3. Density and lot area standards are the most common barriers.

Across the residential zones, density and minimum lot area standards were common barriers. As noted, most missing middle housing types exceed the maximum density of the R-1 zone, while many are below the minimum density of the R-3 and R-4 zones. While the R-2 zone density standards are well-aligned with many of the housing types, this limits these types to a relatively small portion of the City's residential lands.

Density and minimum lot area requirements are a significant barrier to infill development because lots have already been platted. In developed areas, it is often very difficult to acquire additional land and assemble it into a larger lot. Even if there is enough land to meet the maximum density and minimum lot area standards, acquiring more land is costly and may reduce the economic viability of a development.

4. Off-street parking standards present barriers and potential tradeoffs.

The City requires one parking space per dwelling unit for residential uses and applicants may request a 25% reduction from this standard. This level of off-street parking would not typically be a barrier to most of the prototype developments, except for the stacked triplex or fourplex prototypes. Additionally, if a duplex, triplex, or fourplex were created through an internal conversion of an existing house, it is likely that off-street parking standards would present a barrier because the lot may not have been originally designed to accommodate multiple off-street spaces.

Although the off-street parking standards do not present significant barriers to most of the prototypes, there are still tradeoffs to requiring off-street parking that should be considered. For example, on narrow lots where alley access or shared access to a rear parking area is not feasible, the only way to accommodate off-street parking is often through a front-loaded garage. In these cases, the garage can become a prominent feature of the façade because it makes up a large share of the width of the building. This can result in the feeling of a "blank wall" facing the street, which creates a less interesting and comfortable experience for pedestrians. This design also results in closely spaced driveways and curb cuts, which is less comfortable and safe for pedestrians. Some design standards can help to address this issue, but these standards can also present barriers to new development. If off-street parking were not required, then one option would be to use on-street parking and avoid the design challenges associated with front loaded parking on narrow lots.

5. Some Multiple-Family Standards present barriers for triplexes, fourplexes, courtyard apartments, and cottage clusters.

The City's Multiple-Family Standards (EC 9.5500) address design issues associated with larger apartment and mixed-use buildings and may not be entirely appropriate for smaller-scale multi-family buildings that are intended to blend in to single-family neighborhoods. For example, the standards require buildings to be located close to the street. This standard works well for large apartment buildings on corridors where a more urban streetscape is desired. Courtyard apartments; however, are designed to blend into single-family neighborhoods by limiting the width of the building that is close to the street. The U-shaped design creates two small facades along the street that are similar in scale to a single-family house, rather than one long façade that would be much larger in scale. The requirement that entrances face the street and the minimum open space standards may also present barriers especially to smaller multi-family projects.

6. Cluster Subdivision and Planned Unit Development (PUD) applications are valuable for larger projects, but present significant barriers for smaller projects.

The City provides alternative tracks for gaining approval of some of these housing types where the proposed development cannot meet some or all the residential zone development standards. These applications are the Cluster Subdivision (EC 9.8040-9.8055) and Planned Unit Development (PUD) (EC 9.8300-9.8375). These processes allow for exceptions to certain development standards if the project meets other criteria. PUDs are also required for certain uses (such as multi-family in R-1) even if the project meets the standards.

While the applications are valuable tools for allowing for a wider variety of housing types in residential zones, the approval criteria present significant barriers for smaller projects, especially infill development, which is the primary focus of the prototypes in this audit. Neither of the applications provide exceptions to maximum density standards, which are the most common barrier for these housing types. The Cluster Subdivision process is limited to subdivisions with more than 6 units,

which would exclude smaller cottage cluster developments. The PUD process requires significant open space and landscape buffering that would be difficult to meet on a smaller site. For example, PUDs require a two-step application process (tentative and final) which can take six to twelve months to process with combined fees to city over $21,000 and design team requirements. Thus, the cost, complexity, and relative uncertainty associated with these special applications may discourage smaller projects and less experienced developers.

HOUSING PROTOTYPES OVERVIEW

The table below provides an overview of the assumed specifications of each of the housing prototype. The specifications are the approximate, typical dimensions of buildings (width, depth, height), number of dwelling units in the building(s), amount and type of off-street parking provided, and the minimum lot dimensions needed to accommodate the building and off-street parking. These prototypes were created based on example developments and specifications compiled from several sources.[1]

The prototypes represent a finite set of potential developments; there are many possible variations. Additionally, some prototypes may be less likely to develop than others based on market conditions and trends. The intent of the prototypes is to develop an initial understanding of the opportunities and challenges for development of these housing types across each of the City's residential zones, given existing use regulations and development standards. In future phases of the project, when it is determined which housing types the City may want to permit in which zones, the prototypes can be refined and re-evaluated to test if proposed code changes would improve the feasibility of developing each housing type.

Housing Prototype Specifications

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Estimated Dwelling Size (sq. ft)[2]	Stories	Bldg. Height (ft)	Structured/ Garage Parking	Surface Parking	Needed Lot Width (ft)	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/ac)
ADU (Detached)	1	14	28	392	600-800	1.5	24	0	1	40	100	4,000	n/a
ADU (Attached)	1	14	28	392	600-800	1.5	24	0	1	40	100	4,000	n/a
ADU (Internal)	1	N/A	N/A	N/A	600-800	N/A	N/A	0	1	35	80	2,800	n/a
Small Lot Detached (3-Story)	1	15	65	975	2,500	3	35	1 (garage)	0	25	100	2,500	17

[1] Sources of the housing prototype information include:

1. City of Eugene, "Missing Middle Housing Types Handbook." Available at https://www.eugene-or.gov/3652/Missing-Middle-Handbook
2. Eli Spevak and Madeline Kovacs, "Character-Compatible, Space-Efficient Housing Options for Single-Dwelling Neighborhoods," Oregon Transportation Growth Management Program/Department of Environmental Quality. Available at https://www.oregon.gov/lcd/UP/Documents/space-efficient-housing-full-report.pdf
3. UrbsWorks and Oregon Transportation Growth Management, "Housing Choices Guidebook." Available at: https://www.oregon.gov/lcd/Publications/Housing-Choices-Booklet_DIGITAL.pdf
4. Opticos Design, "Missing Middle Housing." Available at http://missingmiddlehousing.com/
5. Bruinier & Associates, an Oregon-based firm that produces stock house plans in a variety of formats. Available at: https://www.houseplans.pro/

[2] Dwelling unit size is an estimate. While most of the dwelling units are smaller than is typical for a conventional, detached new construction, there is a wide range of potential dwelling unit sizes. We selected prototypes with a wide range of sizes to address a range of needs for different households and to be consistent with observed trends in new development. If the City elects to focus on meeting the need for a particular size range, then this information may be useful to identify which housing types would be most likely to meet that need.

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Estimated Dwelling Size (sq. ft)[2]	Stories	Bldg. Height (ft)	Structured/ Garage Parking	Surface Parking	Needed Lot Width (ft)	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/ac)
Small Lot Detached (2-Story)	1	15	65	975	1,500	2	25	1 (garage)	0	25	100	2,500	17
Row House Row (3-Story)	5	100	65	6,500	3,500	3	35	5 (garage)	0	140 (site) 20 (ea. lot)	120	16,800	13
Row House Row (2-Story)	5	100	65	6,500	2,500	2.5	30	5 (garage)	0	140 (site) 20 (ea. lot)	120	16,800	13
Duplex Stacked	2	25	60	1,500	1,500	2	25	0	2 (rear/side)	40	100	4,000	22
Duplex Side-by-Side	2	35	50	1,750	1,500	2	25	2 (garage)	0	50	80	4,000	22
Triplex Stacked	3	25	60	1,500	500-1,000	2.5-3	35	0	2 (rear/side)	40	100	4,000	32
Triplex Side-by-Side	3	60	50	3,000	1,500	2	25	3 (garage)	0	70	80	5,600	23
Fourplex Stacked	4	35	60	2,100	500-1,000	2.5-3	35	0	2 (rear/side)	50	100	5,000	34
Fourplex Side-by-Side	4	80	50	4,000	1,500	2	25	4 (garage)	0	90	80	7,200	24
Courtyard Apartments	8	Varies (U-Shape)		6,200	500-1,200	1	15	0	8 (rear/side)	120	120	14,400	15
Cottage Cluster (Small)	4	Varies		4,200	600-1,200	1.5	20	0	4	120	120	14,400	12
Cottage Cluster (Large)	8	Varies		8,400	600-1,200	1.5	20	0	8	180	120	21,600	16

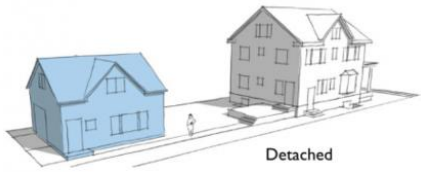
ACCESSORY (SECONDARY) DWELLING UNITS

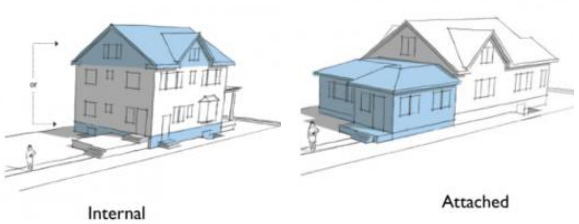
Definition / Description*:* Accessory Dwelling Units (ADUs) are currently referred to as Secondary Dwellings and are defined in EC 9.0050 as follows:

> *Dwelling, Secondary. A dwelling unit that is located on the same lot as a primary one-family dwelling that is clearly subordinate to the primary one-family dwelling, whether a part of the same structure as the primary one-family dwelling or a detached dwelling unit on the same lot. Either the secondary dwelling or the primary dwelling must be occupied by the property owner.*

Housing Prototypes*:* ADUs may be attached or detached from the primary dwelling on the lot, and may be created through 1 of 3 methods:

1. Constructing a separate unit on a lot with a new or existing primary dwelling or converting a detached garage (detached ADU)
2. Adding new floor area to an existing dwelling (attached ADU)
3. Converting existing floor area in an existing dwelling or attached garage (internal ADU);





For the purposes of the prototypes, we assumed an ADU would be between 600-800 square feet in each prototype.

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Estimated Dwelling Size (sq. ft)	Stories	Bldg. Height (ft)	Structured/ Garage Parking	Surface Parking	Needed Lot Width (ft)	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/ac)
ADU (Detached)	1	14	28	392	600-800	1.5	24	0	1	40	100	4,000	n/a
ADU (Attached)	1	14	28	392	600-800	1.5	24	0	1	40	100	4,000	n/a
ADU (Internal)	1	N/A	N/A	N/A	600-800	N/A	N/A	0	1	35	80	2,800	n/a

Assessment of Potential Barriers

The table below provides an assessment of the code standards that could be barriers to developing the ADU prototypes described above.

Accessory Dwelling Units: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
USES AND PERMIT REQUIREMENTS			
Uses and Permit Requirements	R-1 zone: Permitted, subject to special development standards.	✔	
	R-1.5 zone: Not permitted	⊘	This prohibits development of ADUs in the R-1.5 zone.
	R-2, R-3, and R-4 zones: Permitted, subject to special development standards.	✔	See assessment of individual special use standards in the Special Use Standards section of this table.
ZONE DEVELOPMENT STANDARDS			
Minimum Density	R-1 zone: No minimum density	✔	Per EC 9.2751(1), minimum density requirements do not apply to attached accessory dwellings in the R-1 zone; however, there is no minimum density requirement for the R-1 zone, so this exception may be unnecessary.
	R-1.5 zone: No minimum density	✔	
	R-2 zone: 13 units per acre	✔	
	R-3 and R-4 zones: 20 units per acre	✔	
Maximum Density	R-1 zone: 14 units per acre	⚠	If ADUs are counted as a unit when calculating density, then the minimum lot size necessary to meet the maximum density would be 6,100 square feet. According to the Housing Tools and Strategies Evaluation, completed by Strategic Economics, this standard excludes an ADU from being built on approximately 15% of lots citywide and 50% of lots in the University area. However, Oregon Senate Bill 1051 requires that cities allow at least one accessory dwelling unit for each detached single family dwelling.
	R-1.5 zone: No maximum density	✔	
	R-2 zone: 28 units per acre	⊖	An internal ADU on a very small lot, such as a basement ADU on a 2,500-3,000 townhome lot, may exceed this density. This is a moderate barrier as most ADUs will be proposed on larger lots, and thus the density of the R-2 zone is unlikely to be a barrier.
	R-3 zone: 56 units per acre	✔	

Accessory Dwelling Units: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	R-4 zone: 112 units per acre	✔	
Building Size	University Area: • For lots at least 7,500 square feet and less than 9,000 square feet in area, the ADU shall not exceed 600 square feet. • For lots at least 9,000 square feet in area, the ADU shall not exceed 800 square feet.	⛔	These standards would limit the size of an ADU to 600 square feet on many lots, which may discourage investment in ADUs. Allowing for a slightly larger ADU, up to 800 square feet, is likely to appeal to a wider range of households and situations.
	All Other Lots: • Building square footage is limited to 10 percent of the total lot area or 800 square feet, whichever is smaller. • In addition, for detached ADUs, up to 300 square feet of un-heated garage or storage space may be attached to the ADU and is not counted in the allowable building square footage.	⛔	On smaller lots (4,500-6,000) square feet, this standard would limit the size of the ADU to 450-600 square feet. As noted above, larger ADUs would appeal to a wider range of households and situations. The limit of 300 square feet of un-heated garage or storage space attached to the ADU can be a barrier as it can prohibit the attachment of an ADU to an existing garage if the garage is over 300 square feet.
Building Height and Setbacks	University Area, detached ADU: • Interior yard setback of 5 feet • Sloped maximum building height beginning at 8 feet above grade at lot line on a 10/12 slope away from lot line, up to 18 feet.	⚠	The sloped height standard may be a barrier for detached ADUs and encourage attached ADUs. The sloped height standard also encourages one-story ADUs, but the size of a one-story ADU may be also limited by the maximum lot coverage standard. The maximum height of 18 feet is a barrier to 1.5 story ADU, which would typically be 20-25 feet in height. The sloped height standard is also a barrier in these situations: • On sloped lots where the grade slopes down to the lot line. • Where an existing accessory structure is proposed to be converted to an ADU and meets the standard setback but is too tall to meet the sloped height setback.
	Flag lots: • Interior yard setback of 10 feet • Sloped maximum building height beginning at 8 feet above grade at lot line on a 10/12 slope away from lot line, up to 18 feet for detached ADU and up to base zone max height for attached ADU.	⚠	Same assessment as above related to the sloped height setback. The 10 feet interior yard setback may present an additional barrier, as it reduces useable yard space within the interior of the lot as the ADU would need to be placed further away from the perimeter of the lot. The maximum height of 18 feet is a barrier to 1.5 story ADU, which would typically be 20-25 feet in height.
	All other lots, attached ADU that is less than 60 feet from the front lot line: • Interior yard setback of 5 feet • Max building height is base zone max height.	✔	

Accessory Dwelling Units: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	All other lots, attached ADU that is more than 60 feet from the front lot line: • Interior yard setback of 5 feet • Sloped maximum building height beginning at 8 feet above grade at 10/12 slope away from lot line, up to 18 feet.	⚠	The sloped height setback may present a barrier, as described above. The maximum height of 18 feet is a barrier to 1.5 story ADU, which would typically be 20-25 feet in height.
	All other lots, detached ADU: • Interior yard setback of 5 feet • Sloped maximum building height beginning at 8 feet above grade at 10/12 slope away from lot line, up to 18 feet.	⚠	The sloped height setback may present a barrier, as described above. The maximum height of 18 feet is a barrier to 1.5 story ADU, which would typically be 20-25 feet in height.
Maximum Lot Coverage	R-1 and R-2 zones: Maximum lot coverage of 50 percent	⛔	This standard may present a barrier in two situations. First, this standard may present a barrier on a smaller lot. If the primary dwelling's building footprint is 1,750 square feet, and the ADU is about 400 square feet, then this would exceed 50% lot coverage on a 4,000 square foot lot. Second, if either the primary dwelling or the ADU are single-story buildings, which typically have a larger footprint than 1.5 or 2 story homes, then the maximum lot coverage standard may present a barrier.
	R-1.5, R-3, and R-4 zones: No maximum lot coverage.	✔	
Outdoor Living Area	R-1 and R-1.5 zone: None	✔	
	R-2, R-3, and R-4 zones: 20% of site	✔	
Parking	University Area: • Minimum of 1 and maximum of 2 spaces for the primary dwelling. • Minimum of 1 additional space for ADU.	⚠	On existing lots with existing houses, it is often difficult to identify a location for an additional parking space for an ADU. If the house does not have a two-car garage, as many older houses do not, then the driveway must be widened to accommodate two spaces. This may not be possible because parking is not permitted between the house and the street, and the lot may not be wide enough to accommodate the width of two spaces without placing the space in front of the house. If the house has alley access, then one space can take access from the alley, but many houses do not have alley access. Even if space can be found to accommodate the additional ADU space, construction of the space adds costs to the project.
	All Other Lots: Requires one additional space for the ADU.	⚠	See notes above related to the minimum of one additional space for the ADU.

Accessory Dwelling Units: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
Driveways and Parking Areas	No general standards in R-1, R-1.5, and R-2 zones.	✔	
	R-1 zone: In the University Area: • Limit of 1 driveway accessed from street per lot. • No more than 2 spaces per lot, not including garage. • Driveway and parking must be perpendicular to street. • Maximum dimensions for driveways and parking spaces: Maximum width 22 ft, maximum depth 18 ft. • Driveways and parking spaces must be hard-surfaced.	✔	
	University Area: Where primary vehicle access for the required parking for the ADU is from an alley, the following standards apply: • Only one covered or enclosed parking space may be provided (carport or garage). The covered or enclosed parking space shall be counted towards the total number of parking spaces. • The maximum dimensions for a garage shall be 16 feet by 24 feet, with a maximum garage door width of 9 feet. • The minimum setback for a garage shall be 5 feet from the alley. If the garage is setback greater than 5 feet from the alley, it must be setback a minimum of 15 feet and the area between the garage and the alley shall be counted towards one parking space. • The maximum width for a driveway accessing a garage or carport shall be 12 feet. • The maximum dimensions for one parking space located perpendicular to the alley shall be 12 feet in width by 20 feet in depth. • The maximum dimensions for two side by side parking spaces perpendicular to the alley shall be 20 feet in width by 20 feet in depth. • The maximum dimensions for tandem parking spaces shall be 12 feet in width by 33 feet in depth. • Only one parking space parallel to the alley shall be allowed, and such space shall not exceed 10 feet in width and 20 feet in length along the length of alley.	⛔	The standard that limits the number of parking spaces in a carport or garage is a potential barrier to meeting off-street parking requirements. If the primary dwelling has a two-car garage then it would meet the requirement for two total spaces (one for primary dwelling, one for ADU). However, only one space is permitted to be enclosed and counted toward the requirement, so a second space must be provided on the site. These standards allow for tandem parking if accessed from an alley. This reduces the barrier of providing a total of two off-street parking spaces (one for primary dwelling, one for ADU).

Accessory Dwelling Units: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	• The total vehicle use area, including but not limited to driveways and on-site parking, but not including parking space in garage, shall not exceed 400 square feet. • No parking shall occur outside of the vehicle use area.		
	R-1.5: Auto access and parking shall be provided from the alley to the rear of the lot.	⚠	By requiring alley access, this standard significantly limits the potentially eligible properties for an ADU in this zone, as many infill lots are not served by alleys.
Prohibition on Alley-Access Lots	All Lots: ADUs are prohibited on alley access lots. (An alley access lot is a lot that abutting an alley and not abutting a street and created from the rear portion of an existing lot or parcel.)	⊘	This standard prohibits ADUs on alley access lots and limits the number of lots where an ADU can be developed.
Minimum Attachment	All Lots: To be considered attached, requires the SDU and the primary dwellings to share a common wall or ceiling for a minimum of 8 feet.	✔	
Outdoor Storage/Trash	All Lots: Outdoor storage and garbage areas are required to be screened from view from adjacent properties and those across the street or alley with a minimum 42-inch tall 100-percent site obscuring fence or enclosure on at least three sides.	✔	
Dog Keeping	All Lots: Limits properties with an ADU to no more than 3 dogs on the lot.	⊖	This may discourage development of ADUs by potentially excluding any property owners that currently have three or more dogs. This standard may also be difficult to enforce over time.
Owner Occupancy Requirement	All Lots: Requires that either the ADU or the primary dwelling be occupied by the owner of the property. Includes requirement for deed restriction and verification, and allowance for temporary one-year leave.	⚠	This is a significant barrier to ADU development, for two reasons: • The requirement may discourage ADU development because the property owner may be concerned that they would be forced to sell their property if they decide to move. This requirement would not allow them to keep the property and rent it. • The requirement complicates how the property is appraised. If both units cannot be rented, then an appraiser cannot value the property as if it were an investment property and consider the income that could be earned in determining the value of the property. Alternatively, appraisers are more likely to consider the ADU as a special amenity or simply extra living space for the primary dwelling. As a result, the appraised value may

Accessory Dwelling Units: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
			be lower than if the property was appraised as an investment, which could affect financing options for the property owner.
Maximum Bedroom Count	University Area: For lots with a primary dwelling containing 3 or fewer bedrooms, the ADU is limited to 2 bedrooms. For lots with a primary dwelling containing 4 or more bedrooms, the ADU is limited to 1 bedroom.	⛔	The limitation on ADUs to 1-bedroom where the primary house has 4 bedrooms may present a barrier as a 1-bedroom ADU may appeal to fewer households and situations than a 2-bedroom ADU.
	All Other Lots: Limits the SDU to no more than 2 bedrooms.	✔	
Maximum Occupancy	University Area: For lots with a primary dwelling containing 3 or fewer bedrooms, limits the SDU to 3 occupants. For lots with a primary dwelling containing 4 or more bedrooms, limits the SDU to 2 occupants.	⛔	Limiting the ADU to 2 occupants when the primary dwelling contains 4 bedrooms may restrict the number of households and situations where an ADU could provide a viable housing option. For example, a small household in a large primary dwelling with 4 bedrooms (1-2 people, such as an elderly couple) would not be able to rent the ADU to a couple with one child.
LOT STANDARDS			
Minimum Lot Area	R-1 zone, University Area: 7,500 square feet	⚠	According to the Housing Tools and Strategies Evaluation, completed by Strategic Economics, this standard excludes an ADU from being built on approximately 50% of lots in the University Area.
	R-1 zone, Flag Lots: 12,500 square feet	⚠	It is unknown what portion of flag lots are of this minimum area, but it is likely that this standard precludes ADUs on at least some flag lots.
	R-1 zone, All Other Lots: 6,100 square feet	⚠	According to the Housing Tools and Strategies Evaluation, completed by Strategic Economics, this standard excludes an ADU from being built on approximately 15% of lots citywide.
	All other zones: 4,500 square feet	✔	
Maximum Lot Area	R-1 zone: Maximum lot area 13,500 square feet, applies only to new subdivisions and partitions, with exceptions.	✔	
	All other zones: No maximum lot area	✔	
Lot Dimensions	R-1 zone, University Area: The boundaries of the lot must be sufficient to fully encompass an area with minimum dimensions of 45 feet by 45 feet.	⛔	The “needed lot width” identified in the prototypes is 35 – 40 feet. This standard, which requires at least 45 feet, presents a potential barrier to these narrower lot width.

Accessory Dwelling Units: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
Additional Standards for ADUs on Flag Lots	Access Pole Width: Minimum width of 25 feet for any ADU on a flag lot existing or approved prior to August 29, 2014. ADUs are prohibited on new flag lots created after August 2014.	⛔	It is unknown what portion of flag lots would meet this standard; however, few lots are likely to meet the standards to have an ADU given the lot size and pole width requirements.
	Access: No more than four dwellings (including primary and accessory dwellings) may take access off an individual pole or combined poles.	✔	Most flag lot poles do not serve more than two dwellings, so this is not anticipated to be a barrier in many cases.
	Building Height/Interior Setback. • Interior yard setbacks: 10 feet. • Sloped maximum building height beginning at 8 feet above grade at 10/12 slope away from lot line, up to 18 feet. • Allowances for setback intrusions do not apply within the setback described in above, except that eaves and chimneys are allowed to project into this setback no more than 2 feet. • Standard may be adjusted to for an accessory dwelling over an accessory building	⛔	The 10-foot interior yard setback can present a barrier to ADUs on flag lots as it limits where the ADU can be placed. The sloped maximum height standard is a barrier to 1.5 or 2 story ADUs, as described above.
	Driveway Standards. • Minimum driveway width: 12-20 feet • Driveway setbacks: Driveway paving shall be setback 2.5-6 feet from the edge of the pole • Parking is not allowed on any portion of the pole. • Landscaping. Both sides of the pole, shall be landscaped to meet the Low Screen Landscape Standard (L-2), with some exceptions to certain standards	⛔	The minimum width and driveway setback standards would present a barrier for ADU development on an existing flag lot that does not meet these standards. If the flag lot pole does not meet these standards (for example, it is too narrow) it would be very difficult to adjust the driveway or lot line of the pole to meet these standards. The parking and landscaping standards are not significant barriers. The pole should not be used for parking if it is intended for access. The landscaping requirement may add costs but is not a major barrier.

SMALL LOT DETACHED HOUSES

Definition / Description: Small lot detached houses would be classified as a One-Family Dwelling in EC 9.0500:

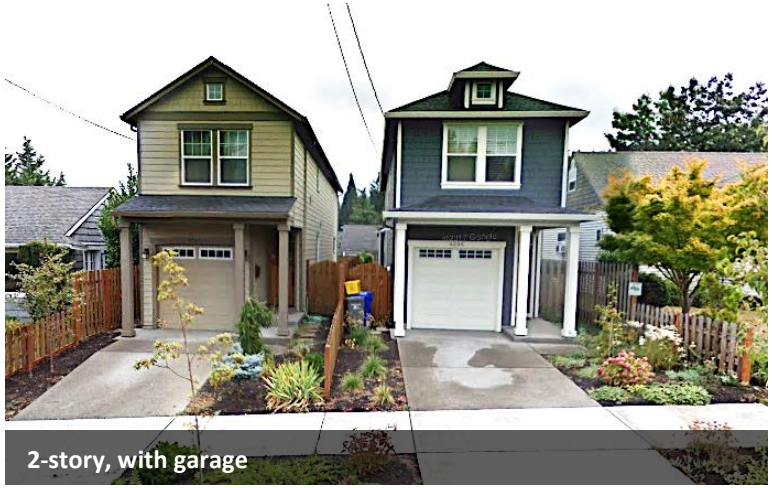
> ***Dwelling, One-Family***. *A dwelling that may have a common wall, roof or foundation with another one-family dwelling on a separate lot or may share a common wall, roof, or foundation with an accessory dwelling on the same lot.*

The defining characteristic of "small lot detached houses" is that they are built on smaller lots than conventional detached houses. Depending on the size of the structure, they may have smaller setbacks and greater lot coverage than a typical single-family house.

Housing Prototypes:

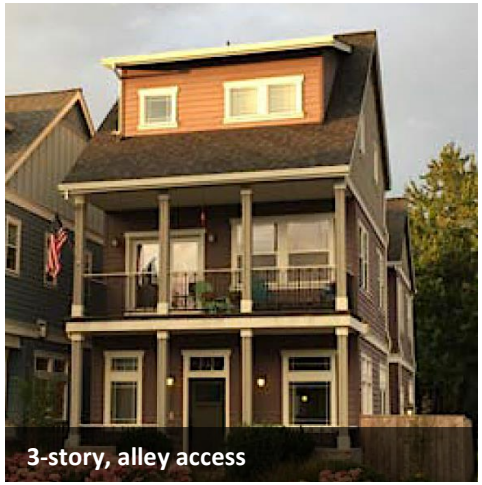
For the purposes of the prototypes, we assumed a dwelling size of 1,500 square feet for the 2-story house and 2,500 square feet for a 3-story house. The 3-story prototype would provide for relatively large individual dwelling units, which would likely not be affordable to people with lower or moderate incomes. However, reducing the dwelling size would not reduce regulatory barriers to development of the prototype compared to the 2-story prototype, as it has the same footprint and lot coverage as the 2-story prototype and can meet the maximum height standards of all residential zones.

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Estimated Dwelling Size (sq. ft)	Stories	Bldg. Height (ft)	Structured/ Garage Parking	Surface Parking	Needed Lot Width (ft)	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/ac)
Small Lot Detached (3-Story)	1	15	65	975	2,500	3	35	1 (garage)	0	25	100	2,500	17
Small Lot Detached (2-Story)	1	15	65	975	1,500	2	25	1 (garage)	0	25	100	2,500	17



2-story, with garage

2-story, no parking



3-story, alley access

Assessment of Potential Barriers

The table below provides an assessment of the standards in the current Code that could be potential barriers to developing the building prototypes described above.

Small Lot Detached Houses: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
USES AND PERMIT REQUIREMENTS			
Uses and Permit Requirements	R-1 zone: Permitted	✔	
	R-1.5: Not permitted	⊘	This prohibits development of small lot detached houses in the R-1.5 zone.
	R-2: Permitted	✔	
	R-3: Permitted	✔	
	R-4: Permitted	✔	
Special Use Limitations	There are no special use standards for one-family dwellings, except as provided in EC 9.2741(10) for Churches, Synagogues, and Temples.	✔	
ZONE DEVELOPMENT STANDARDS			
Minimum Density	R-1 zone: No minimum density	✔	
	R-2 zone: 13 units per acre	✔	
	R-3 and R-4 zones: 20 units per acre	⚠	The prototype houses, on a 2,500 square foot lot, achieve a density of 17 units per acre, below this minimum standard.
Maximum Density	R-1 zone: 14 units per acre	⊖	The prototype houses exceed this density at 17 units per acre. A 3,500 square foot lot would be needed to meet this maximum density. This is still considered a relatively small lot, but may be less economically viable and efficient as a house on a 2,500 square foot lot.
	R-2 zone: 28 units per acre	✔	
	R-3 zone: 56 units per acre	✔	
	R-4 zone: 112 units per acre	✔	
Maximum Building Height	R-1 zone: 30 feet	⊖	The maximum height of 30 feet could be a barrier to development of a 3-story small lot detached house with flat or less sloped roofs. If the pitch of the roof is greater than 6/12, then an additional 7 feet of building height is granted, which may remove this barrier for 2.5 or 3-story buildings.

	R-2 zone: • If proposed as part of conventional subdivision or partition (Small Lot Standards): 30 feet • Infill or redevelopment on an existing lot: 35 feet, except 30 feet if within 50 feet of properties zoned R-1	⛔	The maximum height of 30 feet could be a barrier to development of a 3-story small lot detached house with flat or less sloped roofs. If the pitch of the roof is greater than 6/12, then an additional 7 feet of building height is granted, which may remove this barrier for 2.5 or 3-story buildings.
	R-3 and R-4 zone: • If proposed as part of conventional subdivision or partition (Small Lot Standards): 40 feet, except 30 feet if within 50 feet of properties zoned R-1 • Infill or redevelopment on an existing lot: 50 feet for R-3 and 120 feet for R-4, except 30 feet if within 50 feet of properties zoned R-1	⛔	The maximum height of 30 feet for properties within 50 feet of the R-1 zone could be a barrier to development of a 3-story small lot detached house with flat or less sloped roofs. If the pitch of the roof is greater than 6/12, then an additional 7 feet of building height is granted, which may remove this barrier for 2.5 or 3-story buildings.
Minimum Building Setbacks	All zones: Front setback of 10 feet, interior yard setback of 5 feet and 10 feet between buildings.	✔	
	R-2, R-3, and R-4 zones: If proposed as part of conventional subdivision or partition (Small Lot Standards): Option for zero interior yard setback if there is a common wall construction with a building on an adjacent lot, or there is at least 10 feet of separation between the building and all the buildings on the adjacent lot	✔	This allowance for smaller side setbacks for projects that propose to meet the Small Lot Standards would remove the barrier of a 5-foot setback for small lot detached houses proposed as “zero lot line” developments or with narrow side setbacks of 3 feet.
Driveways and Parking Areas	R-1, R-1.5, and R-2 zones: There are no general driveway and parking area standards in these zones.	✔	
	R-1 zone: In the University Area, following standards apply: • Limit of 1 driveway accessed from street per lot. • No more than 2 spaces per lot, not including garage. • Driveway and parking must be perpendicular to street. • Maximum dimensions for driveways and parking spaces: Maximum width 22 ft, maximum depth 18 ft. • Driveways and parking spaces must be hard-surfaced.	✔	
	R-1.5: Auto access and parking shall be provided from the alley to the rear of the lot.	⛔	By requiring alley access, this standard limits the potentially eligible properties for a small lot detached house in this zone, as many infill lots are not served by alleys. However, a single family home can be built on a legal non-conforming lot of record in a residential zone, even if the lot is below the min lot size.
	R-3 and R-4 zone: • Only one driveway access from street allowed (except for corner lots) • Abutting lots can share driveway	✔	

	• No driveways shall be located in the interior yard setback adjacent to property line, except an interior yard setback that is adjacent to an alley • When driveway/parking is provided from alley associated parking shall not extend further than the street facing facade of the building • Driveway width limited to 20 ft.-22 ft., depending on location of driveway on the site • Driveway depth minimum is 18 ft., maximum is 22 ft. No parking shall occur in the landscaped portion of the required front yard setback.		
Special Standards for Alley-Access Lots in R-1	Building size: No more than 10% of lot size or 800 square feet, whichever is smaller. Up to 1,000 square feet in the University Area.	⚠	The majority of alley access lots appear to be close to the minimum lot area of 4,500 square feet, which means the home could only be 450 square feet Most small lot detached houses exceed 800 square feet. Thus, this size limit may be a significant barrier as larger homes can be more marketable.
	Building height/interior setback: Interior yard setback of 5 feet. Height is limited by a slope function (10/12) beginning at 8 feet, not to exceed 18 feet.	⚠	This standard effectively limits building height to one or 1.5 stories. Most small lot detached houses are 2 to 3 stories.
	Windows, dormers, and balconies: There are several specific standards limiting the placement and number of windows, dormers, and balconies.	✔	
	Bedrooms: No more than three bedrooms per dwelling.	✔	
	Parking Spaces: Minimum of 1 and maximum of 2 spaces.	✔	
Maximum Lot Coverage	R-1 and R-2 zones: 50 percent	⛔	The prototype buildings assume a lot coverage of 39%. A slightly larger building or the same size house on a slightly smaller lot would exceed this standard, so it may present a barrier to some small lot development.
	R-2 and R-3 zones: • If proposed as part of conventional subdivision or partition (Small Lot Standards): 55 percent • Infill/redevelopment on existing lot: None	✔	
	R-4 zone: • If proposed as part of conventional subdivision or partition (Small Lot Standards): 60 percent • Infill/redevelopment on existing lot: None	✔	
Open Space (Outdoor Living Area)	R-1: None	✔	
	R-2, R-3, R-4:	✔	

	• If proposed as part of conventional subdivision or partition (Small Lot Standards): 10% of gross floor area • Infill on existing lot: 20 percent of development site		
LOT STANDARDS			
Minimum Lot Area	R-1 zone: Per cluster subdivision or PUD	⛔	This standard requires small lot detached houses to be developed as a cluster subdivision or PUD, which present barriers to some forms of small lot detached housing, as described in the Special Applications section below.
	R-2, R-3, and R-4 zones: • 4,500 square feet for a standard lot • 2,250 square feet for projects proposed to meet Small Lot Standards as part of a partition or subdivision • Other lot size proposed as part of a Cluster Subdivision or PUD.	✔	The allowance for a smaller lot (2,250 square feet) for projects that propose to meet the Small Lot Standards is important because the standard minimum lot size would be a significant barrier to the prototype developments.
Maximum Lot Area	R-1 zone: Maximum lot area 13,500 square feet, applies only to new subdivisions and partitions.	✔	
Lot Frontage Minimum and Lot Width Minimum	R-1 zone: • 50 feet interior or corner lot • 35 feet for curved or cul-de-sac lot • 15-25 feet for flag lot	⚠	As demonstrated by the prototypes, small lot detached houses can be built on lots as narrow as 25 feet. The cluster subdivision or PUD process would allow for a narrower lot width for projects that can apply under those review procedures.
	R-1.5 zone: 20 feet	✔	
	R-2, R-3, and R-4 zones: • 35 feet interior, corner, or curved lot • 20 feet for cul-de-sac lot • 15-25 feet for flag lot • 20 feet for projects that meet the Small Lot Standards and submit a site review plan, planned unit development, or cluster subdivision.	⛔	As demonstrated by the prototypes, small lot detached houses can be built on lots as narrow as 25 feet. As identified in EC 9.2761(9), the minimum lot width and minimum lot frontage can be reduced to 20 feet as part of an approved site review plan, cluster subdivision, or PUD. This allowance supports small lot detached houses on lots as narrow as 25 feet, as specified by the prototype. However, the requirement to file an additional application adds complexity and cost to a project and could present a barrier, as described in the Special Applications section below.
GENERAL DEVELOPMENT STANDARDS			
Landscaping	No general landscaping standards apply to small lot detached houses.	✔	
Motor Vehicle Parking	Minimum number of spaces: 1 per dwelling for a one-family dwelling	✔	
	No maximum parking standard for residential uses, but R-1 alley access lots can have a maximum of 2 parking spaces	✔	

ROW HOUSES

Definition / Description: Row Houses are defined separately from other dwelling types in EC 9.0500:

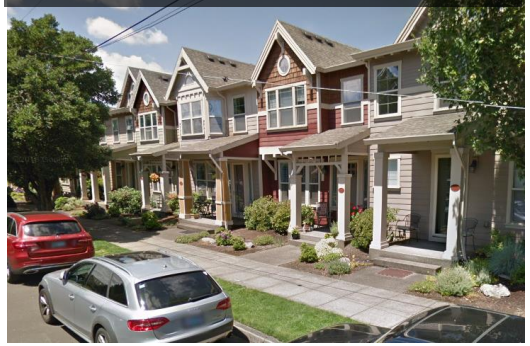
> ***Dwelling, Row House.*** *A dwelling that shares 1 or more walls with 1 or more dwellings and which is located on a row house lot.*

Note that in a row house development each unit is on its own lot; a multi-family development could take a similar form as row houses. For the purposes of this audit, we focus on rowhouses on their own lots.

Housing Prototypes:
For the purposes of the prototypes, we assumed a dwelling size of 2,500 square feet for the 2-story house and 3,500 square feet for a 3-story house as these have been shown to be products which the market will support. The 3-story prototype would provide for relatively large individual dwelling units, which would likely not be affordable to people with lower or moderate incomes. However, reducing the dwelling size would not necessarily reduce regulatory barriers to development of the prototype compared to the 2-story prototype, as it has the same footprint and lot coverage as the 2-story prototype and can meet the maximum height standards of all residential zones.

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Estimated Dwelling Size (sq. ft)	Stories	Bldg. Height (ft)	Structured/ Garage Parking	Surface Parking	Needed Lot Width (ft)	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/ac)
Row House Row (3-Story)	5	100	65	6,500	3,500	3	35	5 (garage)	0	140 (site) 20 (ea. lot)	120	16,800	13
Row House Row (2-Story)	5	100	65	6,500	2,500	2.5	30	5 (garage)	0	140 (site) 20 (ea. lot)	120	16,800	13

2-story row houses



Example site plan

3-story row houses

Assessment of Potential Barriers

The table below provides an assessment of the standards in the current Code that could be potential barriers to developing the building prototypes described above.

Row Houses: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
USES AND PERMIT REQUIREMENTS			
Uses and Permit Requirements	R-1 zone: Permitted, except no new rowhouses in the University Area.	⛔	This is a barrier to development of row houses in the University Area.
	R-1.5 zone: Permitted	✔	
	R-2 zone: Permitted	✔	
	R-3 zone: Permitted	✔	
	R-4 zone: Permitted	✔	
Special Use Limitations	R-1.5 zone: • Maximum Building Size: Eight rowhouses in a building, no more than 180 feet in width. • Minimum Interior or Rear Open Space Required: 400 square feet per rowhouse with a minimum smallest dimension of 14 feet. • Auto access and parking shall be provided from the alley to the rear of the lot; there shall be no auto access from the front of the lot.	⚠	The requirement that auto access and parking be provided from an alley is a significant barrier, as many infill lots do not have access to an alley. As illustrated by the prototype format, it is possible to locate parking in the rear while providing access from the street through a shared driveway. While met by the prototype, the minimum open space requirement may be difficult to meet on smaller sites and may be greater than necessary to create a marketable development. The application process also allows for appeal from the neighborhood which creates uncertainty and the potential for delay.
ZONE DEVELOPMENT STANDARDS			
Minimum Density	R-1 zone: No minimum density	✔	
	R-1.5 zone: No minimum density	✔	
	R-2 zone: 13 units per acre	⛔	May present a barrier for some row house developments. The minimum density is equivalent to the prototype density of row houses (13 units per acre).
	R-3 and R-4 zones: 20 units per acre	⚠	Presents barrier to rowhouse development, required minimum density is greater than typical density of 13 units per acre for row houses.
Maximum Density	R-1 zone: 14 units per acre	⛔	While the prototype development comes in below this density at 13 units per acre, other rowhouse developments may exceed this density, so this standard is a potential barrier to other forms of rowhouses in the zone.
	R-1.5 zone: No maximum density	✔	

Row Houses: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	R-2 zone: 28 units per acre	✔	
	R-3 zone: 56 units per acre	✔	
	R-4 zone: 112 units per acre	✔	
Maximum Building Height	R-1 zone: Max height 30 feet	⛔	Maximum height of 30 feet could be a barrier to development of 2.5 or 3 story row houses. If the pitch of the roof is greater than 6/12, then an additional 7 feet of building height is granted, which may remove this barrier for 2.5 or 3-story buildings.
	R-1.5, R-2, R-3, and R-4 zones: Max height of 35-120 feet	✔	
Maximum Lot Coverage	R-1 and R-2 zones: 50%	⛔	The lot coverage of the prototype rowhouse is approximately 38%, meeting this standard. However, a rowhouse development on a slightly smaller lot may have difficulty meeting this standard.
	R-1.5, R-3, and, R-4 zones: None	✔	
Open Space (Outdoor Living Area)	R-1 and R-1.5 zones: None	✔	
	R-2, R-3, and R-4 zones: 20% of site	⛔	Accommodating 20% open space may be difficult on smaller lots.
Driveways and Parking Areas	Rowhouses are required to be accessed from the rear of the lot and have a garage or carport in all zones.	⚠	By requiring rear access, this standard significantly limits the potentially eligible properties for a rowhouses in this zone, as many infill lots are not served by alleys. It can be feasible to create a rear access driveway, but this can be difficult on a smaller sites.
	R-1 zone: In the University Area, following standards apply: • Limit of 1 driveway per lot. • No more than 2 parking spaces per lot, not including garage. • Driveway and parking spaces must be perpendicular to street. • Maximum dimensions for driveways and parking spaces. • Maximum width 22 ft, maximum depth 18 ft. • Driveways and parking spaces must be hard-surfaced.	✔	
	R-1.5: Auto access and parking shall be provided from the alley to the rear of the lot	⚠	By requiring alley access, this standard significantly limits the potentially eligible properties for a rowhouses in this zone, as many infill lots are not served by alleys.

Row Houses: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	R-3 and R-4 zone: The following standards apply: • Only one driveway access from street allowed (except for corner lots) • Abutting lots can share driveway • No driveways shall be located in the interior yard setback adjacent to property line, except an interior yard setback that is adjacent to an alley • When driveway/parking is provided from alley associated parking shall not extend further than the street facing facade of the building • Driveway width limited to 20 ft.-22 ft., depending on location of driveway on the site • Driveway depth minimum is 18 ft., maximum is 22 ft.	✔	
LOT STANDARDS			
Minimum Lot Area	R-1 Zone: Rowhouse lots require a minimum lot size of 1,600 square feet. Rowhouses can be created only in a subdivision created after August 1, 2001 that contain 10 or more lots and where overall residential density in the subdivision complies with all development standards.	⚠	This standard is a significant barrier to rowhouse development in the R-1 zone because rowhouses must be part of a subdivision that either includes other low-density housing or it must include substantial open space in order to meet the maximum density standards.
	R-2, R-3, and R-4 Zone: Rowhouse lots require a minimum lot size of 1,600 square feet	✔	
Maximum Lot Area	R-1 zone: Maximum lot area 13,500 square feet, applies only to new subdivisions and partitions.	✔	
Minimum Lot Frontage and Width	All zones require a minimum lot frontage and width of 15 feet for rowhouse lots	✔	
GENERAL DEVELOPMENT STANDARDS			
Landscaping	• No general landscaping standards apply to rowhouses. • Parking area landscaping standards do not apply to rowhouses.	✔	
Motor Vehicle Parking	Minimum number of spaces: 1 per dwelling for rowhouses	✔	
	No maximum parking standard for residential uses.	✔	

DUPLEXES

Definition / Description: Duplexes are defined separately from other dwelling types in EC 9.0500:

> **Dwelling, Duplex**. *A building designed and used as dwellings for 2 families living independently of each other and having separate housekeeping facilities for each family that are connected either by common walls or common ceiling/floor connection. A building is not a duplex if one of the dwellings is an accessory dwelling.*

Housing Prototypes:
For the purposes of the prototypes, we assumed a dwelling size of approximately 1,500 square feet for a stacked duplex and 1,500 square feet for a side-by-side duplex.

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Estimated Dwelling Size (sq. ft)	Stories	Bldg. Height (ft)	Structured/ Garage Parking	Surface Parking	Needed Lot Width (ft)	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/ac)
Duplex Stacked	2	25	60	1,500	1,500	2	25	0	2 (rear/side)	40	100	4,000	22
Duplex Side-by-Side	2	35	50	1,750	1,500	2	25	2 (garage)	0	50	80	4,000	22


Stacked duplex


Side-by-side duplex


Side-by-side duplex

Assessment of Potential Barriers

The table below provides an assessment of the standards in the current Code that could be potential barriers to developing the building prototypes described above.

Duplexes: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
USES AND PERMIT REQUIREMENTS			
Uses and Permit Requirements	R-1 zone: Permitted subject to special use limitations, except no new duplexes in the University Area.	⛔	This is a barrier to more development of duplexes in the University Area.
	R-1.5 zone: Not Permitted	🚫	This prohibits development of duplexes in the R-1.5 zone.
	R-2 zone: Permitted	✔	
	R-3 zone: Permitted	✔	
	R-4 zone: Permitted	✔	
Special Use Limitations	R-1 zone: Duplexes only permitted as follows: • The duplex was legally established on August 1, 2001. • The duplex is on a corner lot which is at least 8,000 square feet in size. • The duplex is on a lot that was identified as being developable for a duplex on a subdivision plat.	⚠	This is a significant barrier for development of duplexes. The number of lots identified as a "duplex lot" in subdivision plats is likely to be a small share of all lots. Corner lots make up a small share of all lots, and the minimum size requirement will further limit the number of eligible lots. In addition to limiting the pool of candidate lots for a duplex, the minimum lot size presents three other issues: • The minimum lot size is an economic barrier to developing a duplex. As illustrated by the prototypes below, duplexes are physically feasible to construct on lots as small as 4,000 square feet. Developing a duplex on an 8,000 square foot lot may be more difficult because the land costs are higher, and the developer may not be able to fully offset this cost by charging a higher price for the larger lot or larger dwelling units. • The minimum lot size may result in a building that is not compatible in bulk and scale to detached single-family houses. Many existing detached houses are likely built on lots smaller than 8,000 square feet. If a developer maximizes the size of a duplex on an 8,000 square foot lot, the structure may be significantly larger than nearby homes • The minimum lot size standard would prohibit conversion of many existing single-family homes to duplexes if the lot is smaller than 8,000 square feet and not on a corner.
ZONE DEVELOPMENT STANDARDS			
Minimum Density	R-1 zone: No minimum density	✔	

Duplexes: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	R-1.5 zone: No minimum density	✔	
	R-2 zone: 13 units per acre	✔	
	R-3 and R-4 zones: 20 units per acre	⛔	The prototype duplexes meet this density at 22 units per acre (4,000 sq. ft. lot). However, a duplex on a 5,000 square foot lot would be a density of 17 units per acre. Thus, this standard may be a barrier to duplexes on some lots in the R-3 and R-4 zones. On lots 5,000 square feet or larger, it may be necessary to build a triplex or fourplex in order to meet the minimum density in the R-3 and R-4 zones.
Maximum Density	R-1 zone: 14 units per acre	⚠	The prototype duplexes exceed this density. To meet this density, a duplex would need to be built on a 6,100 square foot lot. As demonstrated by the prototypes, it is feasible to build duplexes on a smaller lot, and requiring a larger lot limits the number of eligible infill lots and presents an economic barrier to development of duplexes.
	R-1.5 zone: No maximum density	✔	
	R-2 zone: 28 units per acre	✔	
	R-3 zone: 56 units per acre	✔	
	R-4 zone: 112 units per acre	✔	
Maximum Building Height	R-1 zone: Max height 30 feet	✔	
	R-1.5, R-2, R-3, and R-4 zones: Max height of 35-120 feet	✔	
Minimum Building Setbacks	All zones: Front setback of 10 feet, interior yard setback of 5 feet and 10 feet between buildings.	✔	
Maximum Lot Coverage	R-1 and R-2 zones: 50%	⛔	The prototypes represent a lot coverage of 37% for the stacked duplex and 42% for the side-by-side duplex. This standard is not a barrier to the prototype but may be a barrier for a duplex on a slightly smaller lot or a lot with accessory structures.
	R-1.5, R-3, and, R-4 zones: None	✔	
Open Space (Outdoor Living Area)	R-1 zone: None	✔	
	R-2, R-3, and R-4 zones: 20% of site	⛔	This standard may be difficult to meet because the it requires at least 400 square feet of common open space. For a side-by-side duplex, often the back yards are separated and considered private open space. Common open space would need to be provided in the front yard, with a minimum dimension of 15 feet. This may be

Duplexes: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
			difficult to meet for the prototype side-by-side duplex, and the width of each front yard (outside the driveways) would be about 13 feet.
Driveways and Parking Areas	No general standards in R-1, R-1.5, and R-2 zones.	✔	
	R-1 zone: In the University Area, following standards apply: • Limit of 1 driveway per lot. • No more than 2 parking spaces per lot, not including garage. • Driveway and parking spaces must be perpendicular to street. • Maximum dimensions for driveways and parking spaces. • Maximum width 22 ft, maximum depth 18 ft. • Driveways and parking spaces must be hard-surfaced.	⚠	If duplexes were allowed in the University Area, limiting the number of driveways to one per lot is a significant barrier for a side-by-side duplex, which often includes a front-loaded garage with individual driveways for each unit.
	R-1.5 zone: Auto access and parking shall be provided from the alley to the rear of the lot	⚠	By requiring alley access, this standard significantly limits the potentially eligible properties for a duplex in this zone, as many infill lots are not served by alleys.
	R-3 and R-4 zone: The following standards apply: • Only one driveway access from street allowed (except for corner lots) • Abutting lots can share driveway • No driveways shall be located in the interior yard setback adjacent to property line, except an interior yard setback that is adjacent to an alley • When driveway/parking is provided from alley associated parking shall not extend further than the street facing facade of the building • Driveway width limited to 20 ft.-22 ft., depending on location of driveway on the site • Driveway depth minimum is 18 ft., maximum is 22 ft.	⚠	Limiting the number of driveways to one per lot is a significant barrier for a side-by-side duplex, which often includes a front-loaded garage with individual driveways for each unit. It may be possible to combine the driveways, however. Additionally, not allowing driveways to be located in interior yard setback areas is a barrier because it may require a wider lot or a narrower building to accommodate a driveway.
LOT STANDARDS			
Minimum Lot Area	R-1 Zone: 8,000 square feet, must be designated as a duplex lot in subdivision or on a corner.	⚠	For a description of why these standards are a barrier, see the Special Use Limitations section.

Duplexes: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	R-2, R-3, and R-4 Zone: • 4,500 square feet for a standard lot • 2,250 square feet for a small lot	✔	
Maximum Lot Area	R-1 zone: Maximum lot area 13,500 square feet, applies only to new subdivisions and partitions.	✔	
Lot Frontage Minimum and Lot Width Minimum	R-1 zone: • 50 feet interior or corner lot • 35 feet for curved or cul-de-sac lot • 15-25 feet for flag lot	⛔	As demonstrated by the stacked duplex prototype, a duplex can be physically accommodated on a lot that is 40 feet wide. This may present a barrier to development on smaller lots. The side-by-side duplex prototype would require at least a 50-foot wide lot; however, this standard would not present a barrier to this prototype.
	R-1.5 zone: 20 feet	✔	
	R-2, R-3, and R-4 zones: • 35 feet interior, corner, or curved lot • 20 feet for cul-de-sac lot • 15-25 feet for flag lot	✔	
Housing Mix Maximum	R-1 zone: Unless otherwise approved through a PUD, a subdivision may not include more than 25% duplex lots.	⚠	This standard is a significant barrier to development of duplexes as part of a conventional subdivision (not a PUD) in the R-1 zone. The standard would limit the number of duplexes in a subdivision, even if the subdivision met overall density standards.
GENERAL DEVELOPMENT STANDARDS			
Landscaping	• No general landscaping standards apply to duplexes. • Parking area landscaping standards do not apply to rowhouses.	✔	
Landscaping Motor Vehicle Parking	• No general landscaping standards apply to duplexes • Parking area landscaping standards do not apply to duplexes.	✔	
	Minimum number of spaces: 2 (1 per dwelling x 25% outright reduction = 1.5, round up to 2).	⛔	This standard may be difficult to meet on smaller infill sites or where a single-family house is converted to a duplex.

TRIPLEXES AND FOURPLEXES

Definition / Description: Triplexes and Fourplexes are defined separately from other dwelling types in EC 9.0500:

> ***Dwelling, Tri-Plex.*** *A building designed and used as dwellings for 3 families living independently of each other and having separate housekeeping facilities for each family.*
>
> ***Dwelling, Four-Plex.*** *A building designed and used as dwellings for 4 families living independently of each other and having separate housekeeping facilities for each family.*

The definitions of triplex and fourplex do not specify that the dwellings need to be on separate lots; therefore, a side-by-side triplex or fourplex could potentially be classified as a rowhouse. However, these housing types are described in the use table for residential zones (Table 9.2740) as "Tri-plex (Three-Family Attached on Same Lot)", which clarifies the distinction from rowhouses. Revising the definition of the housing type to specify that the dwellings are located on one lot would improve the clarity of the code.

Housing Prototypes:
For the purposes of the prototypes, we assumed a dwelling size of approximately 500-1,000 square feet for a stacked triplex or fourplex, as the building can be divided in different ways to create a range of dwelling unit sizes. For the side-by-side duplex or triplex, we assumed a dwelling size of 1,500 square feet.

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Estimated Dwelling Size (sq. ft)	Stories	Bldg. Height (ft)	Structured/ Garage Parking	Surface Parking	Needed Lot Width (ft)	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/ac)
Triplex Stacked	3	25	60	1,500	500-1,000	2.5-3	35	0	2 (rear/side)	40	100	4,000	32
Triplex Side-by-Side	3	60	50	3,000	1,500	2	25	3 (garage)	0	70	80	5,600	23
Fourplex Stacked	4	35	60	2,100	500-1,000	2.5-3	35	0	2 (rear/side)	50	100	5,000	34
Fourplex Side-by-Side	4	80	50	4,000	1,500	2	25	4 (garage)	0	90	80	7,200	24


Stacked triplex


Side-by-side triplex


Stacked fourplex

Assessment of Potential Barriers

The table below provides an assessment of the standards in the current Code that could be potential barriers to developing the building prototypes described above.

Triplex and Fourplex: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
USES AND PERMIT REQUIREMENTS			
Uses and Permit Requirements	R-1 zone: Permit triplex and fourplex, subject to special use standards	⛔	Triplexes and fourplexes are a permitted use, but special use standards present barriers to development, as noted below.
	R-1.5 zone: Not permitted	🚫	This prohibits development of triplexes and fourplexes in the R-1.5 zone.
	R-2, R-3, and R-4 zones: Permit triplex and fourplex	✔	
Special Use Limitations	In the R-1 zone, triplexes and fourplexes are only permitted under two conditions: • The lot was identified for a triplex or fourplex, respectively, in the subdivision they are not prohibited in the Amazon Neighbors, Fairmount Neighbors and South University neighborhoods. • The triplex or fourplex is proposed as part of a PUD.	⚠	This standard presents a significant barrier to development of triplexes and fourplexes in the R-1 zone. By limiting to lots that were originally identified in a subdivision, this standard effectively excludes infill development on existing lots. It is unknown how many lots were identified for a triplex or fourplex but it is likely to be a very small share of the lots in the R-1 zone. The prohibition on triplexes and fourplexes in the University Area neighborhoods further limits the number of lots where these types can be built. The allowance for a triplex or fourplex as part of a PUD provides an alternative option, but the PUD process also presents barriers, as described below.
ZONE DEVELOPMENT STANDARDS			
Minimum Density	R-1 zone: No minimum density	✔	
	R-1.5 zone: No minimum density	✔	
	R-2 zone: 13 units per acre	✔	
	R-3 and R-4 zones: 20 units per acre	✔	
Maximum Density	R-1 zone: 14 units per acre	⚠	All prototypes exceed this maximum density. A triplex or fourplex would need to be built on much larger lot (about 9,335 square feet for a triplex or 12,446 square feet for a fourplex) to comply. This may be economically feasible in some cases, but is a significant barrier to more widespread development.
	R-1.5 zone: No maximum density	✔	

Triplex and Fourplex: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	R-2 zone: 28 units per acre	⛔	The "stacked" prototype exceeds this density, but could meet it if built on a larger lot. The "side-by-side" protoype is below this density.
	R-3 zone: 56 units per acre	✔	
	R-4 zone: 112 units per acre	✔	
Maximum Building Height	R-1 zone: Max height 30 feet	⛔	Maximum height of 30 feet could be a barrier to 2.5 or 3 story "stacked" duplex or triplex. If the pitch of the roof is greater than 6/12, then an additional 7 feet of building height is granted, which may remove this barrier for 2.5 or 3-story buildings.
	R-1.5, R-2, R-3, and R-4 zones: Max height of 35-120 feet	✔	
Minimum Building Setbacks	All zones: Front setback of 10 feet, interior yard setback of 5 feet and 10 feet between buildings.	✔	
Maximum Lot Coverage	R-1 and R-2 zones: Maximum lot coverage of 50 percent	⛔	This standard may be a barrier for the stacked triplex and fourplex prototypes if built on a smaller lot (4,000-5,000 square feet). The standard is a barrier to the side-by-side prototypes, as the lot coverage for these prototypes is approximately 55 percent.
	R-1.5, R-3, and R-4 zones: No maximum lot coverage.	✔	
Outdoor Living Area	R-1 and R-1.5 zone: None	✔	
	R-2, R-3, and R-4 zones: 20% of development site	⛔	This standard may be difficult to meet because it requires at least 400 square feet of common open space. For a side-by-side triplex or fourplex, often the back yards are separated and considered private open space. Common open space would need to be provided in the front yard, with a minimum dimension of 15 feet. This may be difficult to meet because driveways would account for a large portion of the front yard area. This standard may be somewhat easier to meet for a stacked triplex or fourplex because the rear yard would likely be common open space. However, if parking spaces need to be provided in the rear yard then the standard may be difficult to meet on the size lots identified in the prototype.
Driveways and Parking Areas	No general standards in R-1, R-1.5, and R-2 zones.	✔	
	R-1 zone: In the University neighborhoods, following standards apply:	⛔	In order to meet these standards and meet the minimum parking requirements, which require one space per dwelling unit, a triplex or fourplex would be required

Triplex and Fourplex: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	• Limit of 1 driveway per lot. • No more than 2 spaces per lot, not including garage. • Driveway and parking must be perpendicular to street. • Maximum dimensions for driveways and parking spaces: Maximum width 22 ft, maximum depth 18 ft. • Driveways and parking spaces must be hard-surfaced.		to have a garage. These standards limit parking spaces not in driveways to 2 per lot, but a triplex or fourplex would require 3-4 spaces. Including a garage is not a significant barrier but it does limit site design options and reduce livable floor area on the site.
	R-1.5 zone: Auto access and parking shall be provided from the alley to the rear of the lot.	⚠	By requiring alley access, this standard significantly limits the potentially eligible properties for a triplex or fourplex in this zone, as many infill lots are not served by alleys.
	R-3 and R-4 zones: Triplexes and fourplexes are subject to the Multi-Family Development Standards.	N/A	See below for assessment of multi-family standards
Special Standards for Alley-Access Lots in R-1	Building size: No more than 10% of lot size or 800 square feet, whichever is smaller. Up to 1,000 square feet in boundaries of Amazon Neighbors, Fairmount Neighbors and South University Neighborhood Association	⊘	All triplexes or fourplexes would exceed 1,000 square feet in total size (not individual dwelling units), so this standard effectively prohibits these housing types from locating on alley-access lots.
	Building height/interior setback: Interior yard setback of 5 feet. Height is limited by a slope function (10/12) beginning at 8 feet, not to exceed 18 feet.	⚠	This standard effectively limits building height to one or 1.5 stories. Most triplexes and fourplexes are 2 to 3 stories.
	Windows, dormers, and balconies: There are several specific standards limiting the placement and number of windows, dormers, and balconies.	✔	
	Bedrooms: No more than three bedrooms per dwelling.	✔	
	Parking Spaces: Minimum of 1 and maximum of 2 spaces.	✔	This standard would limit the maximum number of parking spaces to two, which would effectively remove a potential barrier for a triplex or fourplex; however, this standard was only intended to apply to single-family dwellings, so would need to be modified if other housing types were permitted on alley access lots.
Maximum Bedroom Count	In the Amazon Neighbors, Fairmount Neighbors and South University Neighborhood Association, there is a maximum of 3 bedrooms per dwelling unless owner allows for a deed restriction which limits the number of unrelated individuals that may live in the dwelling to 3.	⛔	If triplexes and fourplexes were allowed in R-1 in the University Area, this standard may discourage development if 4-bedroom units were more profitable to build, though most units in triplex or fourplex would likely not exceed 3 bedrooms except in the university area where 4 and 5 bedroom apartments are not uncommon.
LOT STANDARDS			

Triplex and Fourplex: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
Minimum Lot Area	R-1 Zone: • Triplex: 12,000 square feet • Fourplex: 16,000 square feet • All lots must be indicated on subdivision plat as developable for a triplex or fourplex.	⚠	As demonstrated by the prototypes, triplex and fourplexes can be physically accommodated on lots between 4,000 to 7,200 square feet. These minimum area standards and platting requirement significantly restrict the number of properties where a triplex or fourplex could be developed. Additionally, a triplex or fourplex may be less economically viable to build on the larger lots required by the code due to higher land costs. This may result in fewer developments and more expensive units where they are developed.
	All other zones: No minimum lot area	✔	
Maximum Lot Area	R-1 zone: Maximum lot area 13,500 square feet, applies only to new subdivisions and partitions, with exceptions.	⛔	This is not a barrier to the prototype. However, under current regulations a fourplex proposed in a subdivision would be required to have a 16,000 square foot lot, therefore, an exception to this standard would be required. The exceptions allow for variances for topography or natural resources, for reserving land for future development, or if the subdivision meets an overall density of 9 units per acre. There may be cases where a proposed subdivision that includes fourplexes could not meet one of the exception criteria. A general exception to this standard may be appropriate for triplexes and fourplexes, as it does not seem it was the intent of this standard to restrict triplexes or fourplexes.
	All other zones: No maximum lot area	✔	
Lot Frontage Minimum and Lot Width Minimum	R-1 zone: • 50 feet interior or corner lot • 35 feet for curved or cul-de-sac lot • 15-25 feet for flag lot	⛔	As demonstrated by the stacked triplex prototype, a triplex can be physically accommodated on a lot that is 40 feet wide. This may present a barrier to development on smaller lots. However, the other triplex and fourplex prototypes would require at least a 50-foot wide lot. Therefore, this standard would not present a barrier to those prototypes.
	R-1.5 zone: 20 feet	✔	
	R-2, R-3, and R-4 zones: • 35 feet interior, corner, or curved lot • 20 feet for cul-de-sac lot • 15-25 feet for flag lot	✔	
Housing Mix Maximum	R-1 zone: Unless otherwise approved through a PUD, a subdivision may not include more than 15% triplex lots and 10% fourplex lots and must include at least 50% single-family dwellings or rowhouses.	⚠	This standard effectively precludes some smaller subdivisions from including triplexes or fourplexes, as the subdivision would need to include at least 7 total lots to include a triplex or 10 total lots to include a fourplex. For larger subdivisions, this standard limits flexibility to integrate a variety of housing types into a development.
SPECIAL USE STANDARDS - MULTIPLE-FAMILY (MF) STANDARDS			

Triplex and Fourplex: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
MF Maximum Setback	On sites with less than 100 feet of street frontage, at least 40% of site width must be occupied by building placed within 10 feet of minimum front setback.	✔	New triplex or fourplex developments would likely maximize buildable area on the site and will not setback more than 10 feet from the required front setback.
MF Building Orientation and Entrances	• Buildings within 40 feet of front lot line must be primarily oriented to the street • Main entrance must face the street, with some exceptions • Upper story entrances must be provided from interior except for if access is provided to 2 or fewer units.	⛔	This standard may be difficult to meet on narrow and deep lots, where a triplex or fourplex may be arranged with one or two units served with entrances on the street and others on the side or rear.
MF Building Mass and Façade	• Maximum building width or depth of 100 feet in R-1/R-2 zones and 150 feet in all other zones • Minimum 15% windows on street facades	✔	
MF Building Articulation	Design features required every 40 feet along horizontal face and 25 feet along vertical face	✔	
MF Site Landscaping	• Minimum landscape area is that required by base zone or by open space requirements • L-1 landscaping required in yards abutting streets • Screening required between private and common open space • Street trees required along street frontage	✔	
MF Open Space	• Minimum combined common and private open space of 15-25% depending on zone and amount of floor area in development. • Common open space may be provided in outdoor areas, or in portion may be provided in natural areas or indoor recreation areas. • Private open space can be provided on ground level areas, balconies, and roof terraces. • 25% open space credits provided for developments within ¼ mile of public park.	⛔	These standards may be difficult to meet on a smaller lot for a triplex or fourplex. The triplex and fourplex prototypes range from 40-55 percent building coverage. Parking and driveway areas will require lot area. In some cases, it may be infeasible for the remaining lot area to meet the minimum dimension or total minimum area standards for open space. The open space credit may alleviate this barrier, but it depends on how many properties would be eligible.
MF Site Access and Internal Circulation	Driveways can only serve vehicular access, cannot be shared with pedestrians.	⛔	This standard is generally appropriate for larger developments; however, in smaller developments, driveways could function as a “shared space” which provides both pedestrian and vehicular access where space is constrained and access to units is on the side or rear of the building, adjacent to a driveway.

Triplex and Fourplex: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
MF Vehicle Parking	• Parking and vehicle use areas and garages shall extend across no more than 50 percent of any street frontage. • No parking between the building and the street.	⚠	This standard is a significant barrier to side-by-side triplexes or fourplexes with front-loaded garages or driveways. The garage wall area may exceed 50% of the street frontage. As no parking is allowed between the building and the street, driveway parking in front of the garage (tandem parking) would be prohibited.
GENERAL DEVELOPMENT STANDARDS			
Landscaping	Basic Landscape Standard (L-1) required wherever landscaped area is proposed to meet minimum area requirements. L-1 requires: • 1 tree per 30 linear feet of front lot line. • 6 shrubs per 30 linear feet of front lot line. • Living plant materials covering a minimum of 70 percent of the required landscape area.	✔	
Motor Vehicle Parking	Minimum number of spaces: 1 per dwelling. In the West University Neighbors and South University Neighborhood Association, requirements scaled by number of bedrooms in unit.	⛔	The side-by-side triplex and fourplex prototypes, which include a garage, would not have difficulty meeting this standard as long as the width of the garage does not exceed 50% of the width of the building. The stacked triplex and fourplex prototypes may have difficulty meeting this standard while also meeting standards for minimum open space and parking location.
	No maximum parking standard for residential uses, but R-1 alley access lots can have a maximum of 2 parking spaces	✔	
	Tandem parking only permitted for multi-family dwellings in certain areas in R-3 and R-4 zones.	⛔	Allowing for tandem parking may provide flexibility and site design options for triplexes and fourplexes on smaller lots in the R-1 and R-2 zones.

COURTYARD APARTMENTS (AND OTHER SMALL-SCALE MULTI-FAMILY)

Definition / Description: Courtyard Apartments, and other small-scale multi-family buildings, would be classified as Multiple-Family Dwellings in EC 9.0500:

> ***Dwelling, Multiple-Family***. *One or more buildings on a single lot or parcel that are designed and used for 3 or more families, all living independently of each other, and having separate housekeeping facilities for each family. The dwellings may share common walls, common roofs, or common foundations. Multiple-family dwellings include condominium and apartment units without regard to ownership status.*


Courtyard apartments

For the purposes of this code audit, small-scale multi-family developments are limited to developments of less than 20 units on sites less than a half-acre in size. Developments of this size are more likely to be compatible with neighborhoods of detached housing in a variety of zones and able to be developed on infill lots in a variety of locations.

Housing Prototypes:
For the purposes of the prototypes, we assumed a dwelling size of approximately 500-1,000 square feet, as the building can be divided in different ways to create a range of dwelling unit sizes

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Estimated Dwelling Size (sq. ft)	Stories	Bldg. Height (ft)	Structured/ Garage Parking	Surface Parking	Needed Lot Width (ft)	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/ac)
Courtyard Apartments	8	Varies (U-Shape)		6,200	500-1,200	1	15	0	8 (rear/side)	120	120	14,400	15


Courtyard apartments


Courtyard apartments

Assessment of Potential Barriers

The table below provides an assessment of the standards in the current Code that could be potential barriers to developing the building prototypes described above.

Courtyard Apartments: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
USES AND PERMIT REQUIREMENTS			
Uses and Permit Requirements	R-1 zone: Permitted by PUD	⚠	This is a barrier to development of courtyard apartments in the R-1 zone, multiple-family dwellings are only permitted if approved as part of a Planned Unit Development. Limiting multiple-family dwellings in the R-1 zone to PUDs is a significant barrier to development of courtyard apartments and other small-scale multiple-family development in the zone. The PUD standards and process are oriented to larger, multi-acre developments. Infill developments on existing lots or smaller projects generally may have difficulty meeting PUD standards and may be discouraged by the cost, complexity and potential uncertainty of the review process, as described in the section below on Special Applications.
	R-1.5 zone: Not permitted	⊘	This prohibits development of courtyard apartments in the R-1.5 zone
	R-2, R-3, R-4 zones: Permitted, subject to special use standards	✔	Multiple-family dwellings are permitted subject to special use standards in the R-2, R-3, and R-4 zones. See assessment of individual special use standards in the Special Use standards section below.
ZONE DEVELOPMENT STANDARDS			
Minimum Density	R-1 zone: No minimum density	✔	
	R-1.5 zone: No minimum density	✔	
	R-2 zone: 13 units per acre	✔	
	R-3 and R-4 zones: 20 units per acre	⚠	The courtyard apartment prototype achieves a density of about 15 units per acre, below the minimum density in the R-3 and R-4 zones. The prototype would likely need to be built as a two-story format, with stacked apartments, to meet the minimum density in these zones.
Maximum Density	R-1 zone: 14 units per acre	⊖	The courtyard apartment prototype slightly exceeds this maximum density. The standard could be met with a minor adjustment such as eliminating one unit, but reducing the number of units will impair the economic viability of this type of development.
	R-1.5 zone: No maximum density	✔	
	R-2 zone: 28 units per acre	✔	

Courtyard Apartments: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	R-3 zone: 56 units per acre	✔	
	R-4 zone: 112 units per acre	✔	
Maximum Building Height	R-1 zone: Max height 30 feet	✔	Maximum height of 30 feet could be a barrier for the 2.5 or 3 story "stacked" courtyard apartments. If the pitch of the roof is greater than 6/12, then an additional 7 feet of building height is granted, which may remove this barrier for 2.5 or 3-story buildings.
	R-1.5, R-2, R-3, and R-4 zones: Max height of 35-120 feet	✔	
Minimum Building Setbacks	All zones: Front setback of 10 feet, interior yard setback of 5 feet and 10 feet between buildings.	✔	
Maximum Lot Coverage	R-1 and R-2 zones: Maximum lot coverage of 50 percent	⛔	The courtyard prototype meets this standard with a lot coverage of 43 percent; however, a similar development on a slightly smaller lot, with detached accessory garages, or a slightly larger building, may not meet the standard.
	R-1.5, R-3, and R-4 zones: No maximum lot coverage.	✔	
Outdoor Living Area	R-1 and R-1.5 zone: None	✔	
	R-2, R-3, and R-4 zones: 20% of development site	⛔	For the prototype courtyard apartment, this standard would require about 2,880 square feet of outdoor living area (20% of 14,400 square foot lot). This amount of area would likely be provided in the central courtyard. The prototype envisions this central courtyard to be between 40-50 feet wide and 70-80 feet deep, with an area from 2,800 to 4,000 square feet. Therefore, this standard is not a significant barrier to the prototype but may present a barrier to a similar development on a slightly smaller lot.
Driveways and Parking Areas	No general standards in R-1, R-1.5, and R-2 zones.	✔	
	R-1 zone: In the Amazon Neighbors, Fairmount Neighbors and South University Neighborhood Association, following standards apply: • Limit of 1 driveway per lot. • No more than 2 spaces per lot, not including garage. • Driveway and parking must be perpendicular to street. • Maximum dimensions for driveways and parking spaces: Maximum width 22 ft, maximum depth 18 ft. • Driveways and parking spaces must be hard-surfaced.	⛔	In order to meet these standards and meet the minimum parking requirements, which require one space per dwelling unit, a courtyard apartment development would be required to have garages. Including a garage is not a significant barrier but it does limit site design options and reduce livable floor area on the site.

Courtyard Apartments: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	R-1.5: Auto access and parking shall be provided from the alley to the rear of the lot.	⚠	By requiring alley access, this standard significantly limits the potentially eligible properties for courtyard apartments in this zone, as many infill lots are not served by alleys.
	R-3 and R-4 zone: See Multi-Family Development Standards.	N/A	
Special Standards for Alley-Access Lots in R-1	Building size: No more than 10% of lot size or 800 square feet, whichever is smaller. Up to 1,000 square feet in boundaries of Amazon Neighbors, Fairmount Neighbors and South University Neighborhood Association	⊘	All courtyard apartments would exceed 1,000 square feet in total size (not individual dwelling units), so this standard effectively prohibits these housing types from locating on alley-access lots.
	Building height/interior setback: Interior yard setback of 5 feet. Height is limited by a slope function (10/12) beginning at 8 feet, not to exceed 18 feet.	✔	
	Windows, dormers, and balconies: There are several specific standards limiting the placement and number of windows, dormers, and balconies.	✔	
	Bedrooms: No more than three bedrooms.	✔	
	Parking Spaces: Minimum of 1 and maximum of 2 spaces.	✔	This standard would limit the maximum number of parking spaces to two, which would effectively remove a potential barrier for a courtyard apartment; however, this standard was only intended to apply to single-family dwellings, so would need to be modified if other housing types were permitted on alley access lots.
Maximum Bedroom Count	In the Amazon Neighbors, Fairmount Neighbors and South University Neighborhood Association, there is a maximum of 3 bedrooms per dwelling unless owner allows for a deed restriction which limits the number of unrelated individuals that may live in the dwelling to 3.	✔	Most units in a courtyard apartment would not include more than 3 bedrooms.
LOT STANDARDS			
Minimum Lot Area	All zones: 4,500 square feet	✔	
Maximum Lot Area	R-1 zone: Maximum lot area 13,500 square feet, applies only to new subdivisions and partitions, with exceptions.	⛔	If a subdivision included a courtyard apartment, then it may need an exception from this standard. The exceptions allow for variances for topography or natural resources, for reserving land for future development, or if the subdivision meets an overall density of 9 units per acre.

Courtyard Apartments: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	All other zones: No maximum lot area	✔	
Lot Frontage Minimum and Lot Width Minimum	R-1 zone: • 50 feet interior or corner lot • 35 feet for curved or cul-de-sac lot • 15-25 feet for flag lot	✔	
	R-1.5 zone: 20 feet	✔	
	R-2, R-3, and R-4 zones: • 35 feet interior, corner, or curved lot • 20 feet for cul-de-sac lot • 15-25 feet for flag lot	✔	
Housing Mix Maximum	R-1 zone: Unless otherwise approved through a PUD, a subdivision may not include more than 15% triplex lots and 10% fourplex lots and must include at least 50% single-family dwellings or rowhouses.	N/A	Multiple-family developments are required to be approved through a PUD in the R-1 zone, so this standard would not apply. However, should the code be modified to allow multiple-family development by-right in the R-1 zone, then this standard may need to be amended to address how it would apply to any subdivision project that includes a multi-family building with more than 4 units.
SPECIAL USE STANDARDS - MULTIPLE-FAMILY (MF) STANDARDS			
MF Maximum Setback	• On sites with more than 100 feet of street frontage, at least 60% of site width must be occupied by building or enhanced pedestrian space placed within 10 feet of minimum front setback. • On sites with less than 100 feet of street frontage, at least 40% of site width must be occupied by building placed within 10 feet of minimum front setback.	⚠	The 60% standard would apply to many courtyard apartments as they will have more than 100 feet of street frontage, but the 40% standard may apply to some smaller developments. Both standards present a barrier to a development with this type of site layout, as buildings are intended to orient toward a central courtyard, not the street. The 60% standard would be more difficult to meet.
MF Building Orientation and Entrances	• Buildings within 40 feet of front lot line must be primarily oriented to the street. • Main entrance must face the street, with some exceptions. • Upper story entrances must be provided from interior except when access is provided to 2 or fewer units.	⛔	The standard that entrances face the street is a moderate barrier as most entrances face an internal courtyard in this configuration, so would need to seek an exception to this standard. An exception is allowed for entrances that are visible from the street, which would apply to most entrances to courtyard units.
MF Building Articulation	• Maximum building width or depth of 100 feet in R-1/R-2 zones and 150 feet in all other zones • Minimum 15% windows on street facades	⛔	Some courtyard buildings may come close to exceeding the maximum width or depth of 100 feet in the R-1 and R-2 zones.

Courtyard Apartments: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	Building articulation: Design features required every 40 feet along horizontal face and 25 feet along vertical face	✔	
MF Site Landscaping	• Minimum landscape area is that required by base zone or by open space requirements • L-1 landscaping required in yards abutting streets • Screening required between private and common open space • Street trees required along street frontage	✔	
MF Open Space	• Minimum combined common and private open space of 15-25% depending on zone and amount of floor area in development. • Common open space may be provided in outdoor areas, or in portion may be provided in natural areas or indoor recreation areas. • Private open space can be provided on ground level areas, balconies, and roof terraces. • 25% open space credits provided for developments within ¼ mile of public park.	✔	A defining feature of the courtyard apartment design is the central open space. The prototype identified above achieves an open space percentage of 43 percent. In most cases, the size of the central open space would meet this standard.
MF Site Access and Circulation	Driveways can only serve vehicular access, cannot be shared with pedestrians.	⛔	Driveways could function as a "shared space" which provides both pedestrian and vehicular access where space is constrained and access to units is on the side or rear of the building, adjacent to a driveway.
MF Vehicle Parking	• Parking and vehicle use areas and garages shall extend across no more than 50 percent of any street frontage. • No parking between the building and the street.	✔	These standards do not present a barrier because the design of a courtyard apartment envisions parking on the side or rear of buildings. For example, if parking were provided on the side of the buildings, the width of the parking spaces/garage and driveway would be about 40 feet, or 28% of the width of a 140-foot wide lot.
GENERAL DEVELOPMENT STANDARDS			
Landscaping	Basic Landscape Standard (L-1) required wherever landscaped area is proposed to meet minimum area requirements. L-1 requires: • 1 tree per 30 linear feet of front lot line. • 6 shrubs per 30 linear feet of front lot line.	✔	

Courtyard Apartments: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	• Living plant materials covering a minimum of 70 percent of the required landscape area.		
Motor Vehicle Parking	Minimum number of spaces: 1 per dwelling with general reduction of 25% allowed. • For an 8-unit courtyard building, this equates to an effective requirement of 6 spaces. • In the West University Neighbors and South University Neighborhood Association, requirements scaled by number of bedrooms in unit.	⛔	The courtyard apartment prototype includes 8 off-street spaces, meeting this standard. Most courtyard apartments could meet this standard, but it may present a barrier on sites without alley access or smaller and narrower lots. Allowing for an additional reduction or exemption would provide more flexibility for these types of properties.
	No maximum parking standard for residential uses, but R-1 alley access lots can have a maximum of 2 parking spaces	✔	
	Tandem parking only permitted for multi-family dwellings in certain areas in R-3 and R-4 zones.	⛔	Allowing for tandem parking may provide flexibility and site design options for courtyard apartments on smaller lots in the R-1 or R-2 zones.

COTTAGE CLUSTER HOUSING

Definition / Description: Cottage Cluster Housing could be classified as One-Family Dwellings or as Multiple-Family Dwellings. If the land is undivided and either structured as a condominium development with multiple owners or owned by a single entity and operated as a rental property, then the development would be classified as Multiple-Family Dwelling in EC 9.0050. The definition of Multiple-Family Dwelling does not require that the units be attached.

> ***Dwelling, Multiple-Family.*** *One or more buildings on a single lot or parcel that are designed and used for 3 or more families, all living independently of each other, and having separate housekeeping facilities for each family. The dwellings may share common walls, common roofs, or common foundations. Multiple-family dwellings include condominium and apartment units without regard to ownership status.*

If the land is divided into individual "fee simple" lots, with the necessary easements to allow cross-access and a homeowners association to manage shared land and facilities, then the units in the development would be classified as a One-Family Dwelling in EC 9.0050, and the development would require subdivision approval.

> ***Dwelling, One-Family.*** *A dwelling that may have a common wall, roof or foundation with another one-family dwelling on a separate lot or may share a common wall, roof, or foundation with an accessory dwelling on the same lot.*

Housing Prototypes:
For the purposes of the prototypes, we assumed a dwelling size of approximately 800-1,200 square feet, as there can be a range of sizes of individual cottages within a development.

Housing Type	# of Units	Bldg. Width (ft)	Bldg. Depth (ft)	Bldg. Footprint (sq. ft)	Estimated Dwelling Size (sq. ft)	Stories	Bldg. Height (ft)	Structured/ Garage Parking	Surface Parking	Needed Lot Width (ft)	Needed Lot Depth (ft)	Needed Lot Size (sq. ft.)	Density (units/ac)
Cottage Cluster (Small)	4	Varies		4,200	600-1,200	1.5	20	0	4	120	120	14,400	12
Cottage Cluster (Large)	8	Varies		8,400	600-1,200	1.5	20	0	8	180	120	21,600	16

Assessment of Potential Barriers

The table below provides an assessment of the standards in the current Code that could be potential barriers to developing the building prototypes described above.

Cottage Cluster Housing: Assessment of Potential Barriers				
Type of Standard		**Summary of Standard**	**Potential Barrier**	**Assessment**
USES AND PERMIT REQUIREMENTS				
Uses and Permit Requirements	One-Family Dwelling	R-1 zone: Permitted	✔	If a cottage cluster were proposed as a subdivision with individual lots, the use would be allowed outright in all zones except R-1.5
		R-1.5 zone: Not permitted	⊘	This prohibits development of cottage cluster housing in the R-1.5 zone.
		R-2, R-3, R-4 zones: Permitted	✔	
	Multiple Family Dwelling	R-1 zone: Permitted through PUD	⊖	This is a barrier to development of cottage cluster housing in the R-1 zone, multiple-family dwellings are only permitted if approved as part of a Planned Unit Development. The PUD standards and process are oriented to larger, multi-acre developments. Infill developments on existing lots or smaller projects generally may have difficulty meeting PUD standards and may be discouraged by the complexity and potential uncertainty of the review process.
		R-1.5 zone: Not permitted	⊘	This prohibits development of cottage cluster housing in the R-1.5 zone.
		R-2 zone: Permitted	✔	
		R-3 and R-4 zones: Permitted, subject to special development standards	⊖	Multiple-family dwellings are permitted, however subject to special use standards in the R-2, R-3, and R-4 zones. See assessment of individual special use standards in the Special Use standards section below.
ZONE DEVELOPMENT STANDARDS				
Minimum Density	R-1 zone: No minimum density		✔	
	R-1.5 zone: No minimum density		✔	
	R-2 zone: 13 units per acre		⊖	The smaller-scale cottage cluster prototypes (4 units on a 14,400 square foot lot) would not meet this minimum density standard. It may be feasible to add another unit or two on the same size lot, but this may make it difficult for the development to meet maximum lot coverage, minimum open space, and minimum parking requirements.

Cottage Cluster Housing: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	R-3 and R-4 zones: 20 units per acre	⚠	Cottage cluster prototypes achieve a density of about 12-16 units per acre, below the minimum density in the R-3 and R-4 zones. It is likely not feasible to achieve this density level and stay true to the cottage cluster concept, which includes significant open space and detached individual units.
Maximum Density	R-1 zone: 14 units per acre	⛔	The smaller-scale prototype is below this density, but the larger and slightly more dense prototype exceeds it. This indicates that some cottage cluster developments, while remaining consistent with the overall concept, may have to find a larger lot or reduce the number of units in order to meet this standard in the R-1 zone.
	R-1.5 zone: No maximum density	✔	
	R-2 zone: 28 units per acre	✔	
	R-3 zone: 56 units per acre	✔	
	R-4 zone: 112 units per acre	✔	
Maximum Building Height	R-1 zone: Max height 30 feet	✔	
	R-1.5, R-2, R-3, and R-4 zones: Max height of 35-120 feet	✔	
Maximum Building Height	R-1 zone: 30 feet	✔	
	R-2 zone: • If proposed as part of conventional subdivision or partition (Small Lot Standards): 30 feet • Infill or redevelopment on an existing lot: 35 feet, except 30 feet if within 50 feet of properties zoned R-1	✔	
	R-3 and R-4 zone: • If proposed as part of conventional subdivision or partition (Small Lot Standards): 40 feet, except 30 feet if within 50 feet of properties zoned R-1 • Infill or redevelopment on an existing lot: 50 feet for R-3 and 120 feet for R-4, except 30 feet if within 50 feet of properties zoned R-1	✔	

Cottage Cluster Housing: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
Minimum Building Setbacks	All zones: Front setback of 10 feet, interior yard setback of 5 feet and 10 feet between buildings.	⚠	If applied only to the perimeter of the site, or the "primary lot" in a multi-family or condo development, these setbacks would not present a barrier. If applied to individual cottage lots, the front setback of 10 feet would present a significant barrier. As cottages usually front a central green, and not the street, a front setback is largely unnecessary. The 10-foot setback between buildings is a significant barrier. In some cases, it may be necessary to place two cottages or a cottage and an accessory structure (such as a garage) less than 10 feet apart, while still meeting fire code requirements.
	R-2, R-3, and R-4 zones: If proposed as part of conventional subdivision or partition (Small Lot Standards): Option for zero interior yard setback if there is a common wall construction with a building on an adjacent lot, or there is at least 10 feet of separation between the building and all the buildings on the adjacent lot	⚠	This allowance for smaller side setbacks for projects that propose to meet the Small Lot Standards is not beneficial for cottage cluster projects because it does not remove the barrier of a 10-foot front setback or 10-foot separation between buildings, as described above.
Maximum Lot Coverage	R-1 and R-2 zones: 50 percent	✔	Both prototypes meet this standard. Cottage clusters will be able to meet this standard if they are consistent with the concept for smaller, detached units with central open space. There may be cases where a minor adjustment to this standard would not detract from the overall concept.
	R-2 and R-3 zones: • If proposed as part of conventional subdivision or partition (Small Lot Standards): 55 percent • Infill/redevelopment on existing lot: None	✔	
	R-4 zone: • If proposed as part of conventional subdivision or partition (Small Lot Standards): 60 percent • Infill/redevelopment on existing lot: None	✔	
Outdoor Living Area	R-1 and R-1.5 zone: None	✔	
	R-2, R-3, R-4 zones: Infill on existing lot: 20 percent of development site	⛔	For the smaller prototype, this standard would require about 2,880 square feet of outdoor living area. The central courtyard in this prototype is envisioned to be between 30-40 feet wide and 60-70 feet deep. If we assume a 30-foot by 60-foot courtyard, then the area would be 1,800 feet, falling short of this standard. Open space surrounding individual cottages can be counted toward this standard, and it would not be a significant barrier for

Cottage Cluster Housing: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
			each of the 4 dwelling units to provide 250 square feet of outdoor space in the side and front yards. For the larger prototype, this standard would require 4,320 square feet of outdoor living area. If we assume the central courtyard to be 40-feet by 80-feet, the area is 3,200 square feet. This would require 140 square feet of open space surrounding each of the 8 cottages, which would not be a significant barrier. While both prototype developments would likely meet this standard, the standard could present a barrier for a development on a slightly smaller lot or with slightly more units (higher density).
	R-2, R-3, R-4 zones: If proposed as part of conventional subdivision or partition (Small Lot Standards): 10% of gross floor area.	✔	If we assume each cottage is 1,200 square feet of floor area, then the total floor area would be 4,800 square feet for the smaller prototype (4 units x 1,200) and 9,600 square feet for the larger prototype. Therefore, this standard would require 480 square feet of open space for the smaller prototype and 960 square feet of open space for the smaller prototype. As described above, this amount of open space would be easily provided as part of the common courtyard in a cottage cluster.
Driveways and Parking Areas	No general standards in R-1, R-1.5, and R-2 zones.	✔	
	R-1 zone: In the Amazon Neighbors, Fairmount Neighbors and South University Neighborhood Association, following standards apply: • Limit of 1 driveway per lot. • No more than 2 spaces per lot, not including garage. • Driveway and parking must be perpendicular to street. • Maximum dimensions for driveways and parking spaces: Maximum width 22 ft, maximum depth 18 ft. • Driveways and parking spaces must be hard-surfaced.	⛔	In order to meet these standards and meet the minimum parking requirements, which require one space per dwelling unit, a cottage cluster development would be required to have garages. Including garages is not a significant barrier but it does limit site design options and may reduce livable floor area on the site.
	R-1.5: Auto access and parking shall be provided from the alley to the rear of the lot.	⚠	By requiring alley access, this standard significantly limits the potentially eligible properties for cottage clusters in this zone, as many infill lots are not served by alleys.
	R-3 and R-4 zone: See Multi-Family Development Standards.	N/A	

Cottage Cluster Housing: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
Special Standards for Alley-Access Lots in R-1	Building size: No more than 10% of lot size or 800 square feet, whichever is smaller. Up to 1,000 square feet in boundaries of Amazon Neighbors, Fairmount Neighbors and South University Neighborhood Association	⊘	All cottage cluster developments would exceed a total of 1,000 square feet of floor area, so this standard effectively prohibits these housing types from locating on alley-access lots.
	Building height/interior setback: Interior yard setback of 5 feet. Height is limited by a slope function (10/12) beginning at 8 feet, not to exceed 18 feet.	✔	
	Windows, dormers, and balconies: There are several specific standards limiting the placement and number of windows, dormers, and balconies.	✔	
	Bedrooms: No more than three bedrooms.	✔	
	Parking Spaces: Minimum of 1 and maximum of 2 spaces.	✔	This standard would limit the maximum number of parking spaces to two, which would effectively remove a potential barrier for a cottage cluster; however, it seems this standard was only intended to apply to single-family dwellings, so would need to be modified if other housing types were permitted on alley access lots.
Maximum Bedroom Count	In the Amazon Neighbors, Fairmount Neighbors and South University Neighborhood Association, there is a maximum of 3 bedrooms per dwelling unless owner allows for a deed restriction which limits the number of unrelated individuals that may live in the dwelling to 3.	✔	Most units in cottage clusters would likely not exceed 3 bedrooms.
LOT STANDARDS			
Minimum Lot Area	R-1: 4,500 square feet	⚠	If applied to the primary lot in a multi-family or condo development, this standard would not present a barrier. If applied to individual cottage lots, this standard effectively precludes cottage cluster developments. Individual cottage lots typically range from 1,750-3,000 square feet. A cottage cluster with individual lots smaller than 4,500 square feet would need to be approved through a cluster subdivision or PUD in the R-1 zone.
	R-2, R-3, and R-4 zones: • 4,500 square feet for a standard lot	✔	The allowance for a smaller lot (2,250 square feet) for projects that propose to meet the Small Lot Standards is important because the standard minimum

Cottage Cluster Housing: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	• 2,250 square feet for projects proposed to meet Small Lot Standards as part of a partition or subdivision • Other lot size proposed as part of a Cluster Subdivision or PUD.		lot size would be a significant barrier if applied to individual lots in a cottage cluster.
Maximum Lot Area	R-1 zone: Maximum lot area 13,500 square feet, applies only to new subdivisions and partitions, with exceptions.	⛔	If applied to the primary lot in a multi-family or condo development that is created through a subdivision or partition, most cottage cluster sites would exceed this lot size and require an exception. The exceptions allow for variances for topography or natural resources, for reserving land for future development, or if the subdivision meets an overall density of 9 units per acre. Almost all cottage clusters would exceed 9 units per acre, so this is not a significant barrier.
	All other zones: No maximum lot area	✔	
Lot Frontage Minimum and Lot Width Minimum	R-1 zone: • 50 feet interior or corner lot • 35 feet for curved or cul-de-sac lot • 15-25 feet for flag lot	⚠	If applied to the primary lot in a multi-family development, this is not a barrier. If applied to individual cottage lots, this is a significant barrier, as individual cottage lots need only be 20-35 feet wide to accommodate a small cottage. Additionally, each individual cottage lot may not have street frontage, so the minimum lot frontage standard could not be met. Therefore, a cottage cluster with individual lots would need to be approved through a cluster subdivision or PUD.
	R-1.5 zone: 20 feet	✔	
	R-2, R-3, and R-4 zones: • 35 feet interior, corner, or curved lot • 20 feet for cul-de-sac lot • 15-25 feet for flag lot • 20 feet for projects that meet the Small Lot Standards and submit a site review plan, planned unit development, or cluster subdivision	⚠	If applied to the primary lot in a multi-family development, this is not a barrier. If applied to individual cottage lots, this is a significant barrier for a cottage cluster. The project would need two adjustments/exemptions from these standards: • Adjustment to allow for individual cottage lots that are only 20-35 feet wide. • An exemption from the minimum lot frontage standard, as some individual cottage lots will front the common courtyard and not have any street frontage. As identified in EC 9.2761(9), the minimum lot width and minimum lot frontage can be reduced to 20 feet as part of an approved site review plan,

Cottage Cluster Housing: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
			cluster subdivision, or PUD. This addresses the first needed adjustment above but does not resolve the need for an exemption from the minimum lot frontage requirement. In order to receive this exemption, a cluster subdivision or PUD application would be required. As described in the Special Applications section below, both processes may present separate barriers to cottage cluster developments.
SPECIAL USE STANDARDS - MULTIPLE FAMILY (MF) STANDARDS			
MF Maximum Setback	• On sites with more than 100 feet of street frontage, at least 60% of site width must be occupied by building or enhanced pedestrian space placed within 10 feet of minimum front setback. • On sites with less than 100 feet of street frontage, at least 40% of site width must be occupied by building placed within 10 feet of minimum front setback.	⚠	The 60% standard would apply to most cottage clusters as they will have more than 100 feet of street frontage. This standard can be a barrier because a substantial portion of the frontage of cottage cluster developments is typically the central green space. Additionally, the cottage units may not be large enough to occupy 60% of the frontage width.
MF Building Orientation and Entrances	• Buildings within 40 feet of front lot line must be primarily oriented to the street. • Main entrance must face the street, with some exceptions. • Upper story entrances must be provided from interior except for if access is provided to 2 or fewer units.	⛔	The standard that entrances face the street is a moderate barrier as most entrances face an internal courtyard in a cottage cluster, so most projects would need to seek an exception to this standard. An exception is allowed for entrances that are visible from the street, which would apply to most entrances to cottage units that face an interior courtyard.
MF Building Mass and Façade	• Maximum building width or depth of 100 feet in R-1/R-2 zones and 150 feet in all other zones • Minimum 15% windows on street facades	✔	
MF Building Articulation	Design features required every 40 feet along horizontal face and 25 feet along vertical face	✔	
MF Site Landscaping	• Minimum landscape area is that required by base zone or by open space requirements • L-1 landscaping required in yards abutting streets • Screening required between private and common open space • Street trees required along street frontage	✔	

Cottage Cluster Housing: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
MF Open Space	• Minimum combined common and private open space of 15-25% depending on zone and amount of floor area in development. • Common open space may be provided in outdoor areas, or in portion may be provided in natural areas or indoor recreation areas. • Private open space can be provided on ground level areas, balconies, and roof terraces. • 25% open space credits provided for developments within ¼ mile of public park.	⛔	As described above in relation to the 20% open space requirement in the R-2, R-3, and R-4 zones, these standards would not be a significant barrier to the prototype developments but could be a barrier to a slightly higher density cottage cluster development.
MF Site access and internal circulation	Driveways can only serve vehicular access, cannot be shared with pedestrians.	⛔	This is not a barrier to the prototype as each cottage is envisioned to have a separated walkway that connects from the entrance to the street and any parking areas. However, on lots where space is constrained, driveways could function as a "shared space" which provides both pedestrian and vehicular access to each unit. While most cottage clusters will provide separate walkways, this requirement eliminates the option of using a shared pedestrian/vehicle access where it might be beneficial to the site design.
MF Vehicle Parking	• Parking and vehicle use areas and garages shall extend across no more than 50 percent of any street frontage. • No parking between the building and the street.	✔	These standards do not present a barrier because the design of a cottage cluster envisions parking on the side or rear or buildings.
GENERAL DEVELOPMENT STANDARDS			
Landscaping	Basic Landscape Standard (L-1) required wherever landscaped area is proposed to meet minimum area requirements. L-1 requires: • 1 tree per 30 linear feet of front lot line. • 6 shrubs per 30 linear feet of front lot line. • Living plant materials covering a minimum of 70 percent of the required landscape area.	✔	
Motor Vehicle Parking	Minimum number of spaces: 1 per dwelling with general reduction of 25% allowed. In the West University Neighbors and South University Neighborhood Association, requirements scaled by number of bedrooms in unit.	✔	

Cottage Cluster Housing: Assessment of Potential Barriers			
Type of Standard	**Summary of Standard**	**Potential Barrier**	**Assessment**
	No maximum parking standard for residential uses, but R-1 alley access lots can have a maximum of 2 parking spaces	✔	
	Tandem parking only permitted for multi-family dwellings in certain areas in R-3 and R-4 zones.	⛔	Allowing for tandem parking may provide flexibility and site design options for cottage clusters on smaller lots in the R-1 and R-2 zones.

SPECIAL APPLICATIONS

This section of the audit reviews two special applications that present an alternative approval path for certain developments. These applications are the Cluster Subdivision (EC 9.8040-9.8055) and Planned Unit Development (EC 9.8300-9.8375).

Cluster Subdivision

The purpose of the Cluster Subdivision application is to "provide for flexibility in achieving the allowed density while protecting natural resources or creating open space on development sites in residential zones."[3]

The process allows for a proposed subdivision to be exempted from or receive an adjustment to most residential development standards, specifically, EC 9.2751 and EC 9.2750, as long as the proposal meets the other approval criteria for a Cluster Subdivision. This exception would remove potential barriers for most of the housing prototypes identified above. For example, a cottage cluster development could receive an exception to the minimum lot area standard in order to create very small lots for individual cottages.

However, there are three key limitations to the Cluster Subdivision application:

1. **No exception or adjustment to maximum density standards**. While allowing for exceptions to setbacks, lot size, height, or other standards, the process requires that the proposed subdivision not exceed the maximum density of the zone. As demonstrated above, most of the housing prototypes exceed the maximum density of the R-1 zone. In order to not exceed the maximum density, the development would require a larger lot and more open space. A larger lot may be difficult to acquire and increase the cost of the development, which may present a barrier.
2. **Minimum of 6 lots required.** A Cluster Subdivision is defined as a subdivision that includes at least 6 lots. This definition excludes smaller subdivisions of 3-5 lots that may otherwise benefit from the process. For example, the small cottage cluster prototype identified above, which includes 4 cottages on a 14,400 square foot lot, would not be eligible for the process.
3. **Discretionary approval criteria.** The Cluster Subdivision application is reviewed through a Type II procedure, which allows for a limited amount of discretion and is approved by the Planning Director. A Type II procedure does not necessarily present a barrier on its own; however, some of the approval criteria for a Cluster Subdivision could be improved to better accomplish desired outcomes.

Planned Unit Development

The purpose of the Planned Unit Development (PUD) process is generally to provide flexibility in design and mix of land uses while achieving goals for natural resources, compatibility, a mix of housing types, and land use efficiency. A PUD applies when a proposed development is located in a refinement plan area that requires a PUD, the property has the /PD overlay zone applied to it, the use regulations require a PUD, or where the property owner elects to file a PUD. A PUD requires a two-step process. A tentative PUD is reviewed as a Type III procedure with decision by the Hearings Official and is appealable to the Planning Commission. A final PUD is reviewed as a Type II procedure

[3] EC 9.8040

with a decision by the Planning Director and appealable to the Hearings Official.

As identified above, there are instances where the housing prototype would be required to be approved through a PUD, such as any multi-family development in the R-1 zone. A PUD provides an alternative approval path for a project that cannot meet development standards or for a housing type that must be approved through a PUD. The PUD process may allow for a cottage cluster development, a subdivision of small lot detached houses, or a subdivision that includes multiple housing types.

The PUD process is generally divided into two "tracks." There is a general track that can apply to all PUDs, and there is a track that applies to any PUD that proposes "needed housing" as defined by state statute. The approval criteria for the general track (EC 9.8320) are generally discretionary, while the approval criteria for the needed housing track (EC 9.8325) are clear and objective.

As described above in relation to Cluster Subdivisions, most developers would prefer to avoid a discretionary review process where possible, due to potential uncertainty in how standards will be interpreted and applied, and the effects that may have on the economic viability of the project. As a two-step process, a PUD presents additional cost (over $21,000 in combined application fees) and complexity due to more complex application submittal requirements (including a design team), public hearing process, and detailed approval criteria. Thus, the general PUD track, which applies discretionary criteria in a Type III process, is a potential barrier to development of all of the housing prototypes considered.

If an applicant can demonstrate that the proposed development includes needed housing, as defined by state statute, then they may apply for the needed housing PUD track. This track may present a less significant barrier because the standards are less discretionary than the general track. However, there are several specific standards that would present barriers to development of many of the housing prototypes[4]:

1. **Maximum density standards.** A PUD is required to comply with the lot dimension and density standards of the underlying zone.[5] Another criterion for PUDs that apply under the "Needed Housing" track requires that "proposed land uses and densities within the PUD are consistent with the land use designation(s) shown on the comprehensive plan diagram."[6] As noted, maximum densities are a key barrier for many of the housing prototypes, particularly in the R-1 zone In order to meet maximum density standards, many of the prototype developments would need to include significant additional common open space areas or be sited on larger lots. This need for additional site area would limit the number of lots/sites where a PUD could be developed. Additionally, it would result in higher land costs and reduce the number of dwelling units in the project, which may make some developments not economically viable.
2. **Minimum 30-foot landscape buffer.** This standard requires a minimum 30-foot landscaped buffer around the perimeter of

[4] The City is currently updating the needed housing PUD approval criteria, which will likely result in changes to some of the identified standards. See https://eugene-or.gov/3947/Clear-Objective

[5] General (Discretionary) PUD Track: EC 9.8320(10)(a); Needed Housing PUD Track: 9.8325(7)(a).

[6] EC 9.8325(2)

the development. This is a significant barrier for a PUD on a smaller lot envisioned in the prototypes. Most prototypes assume a 5-10 foot side and rear setback. A larger lot would be needed to meet this standard.

3. **Proximity to public park or minimum one-acre open space required.** This standard requires that any PUD not located within ¼ mile radius of a public park provide at least one acre of open space on the site. As all the prototypes are designed to fit on lots less than one acre in size, this standard would effectively exclude all of the prototype developments if they were not located within a ¼ mile of a park.